

PROCESS AND OUTCOME EFFICACY OF INTERNET COUNSELING

By

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By  
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## **DEDICATION**

This study is dedicated to the memory of

**George A. Bogardus**  
1920-2001

**Martha Lucille Clark Bogardus**  
1920-1975

Potato and beef farmers who recited epic poetry at our dinner table,  
insisted that we attend school even when the crops needed harvested,  
instilled a profound love of learning in their children and  
kept the house filled with books.

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PROCESS AND OUTCOME EFFICACY OF INTERNET COUNSELING

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Department: Counselor Education

This study examined the process and outcome efficacy of Internet counseling by comparing it to traditional face-to-face counseling in an experimental environment. We recruited 123 undergraduates from fourteen classes in two institutions of higher education. Students volunteered to participate in three personal growth sessions and complete five surveys. Ten graduate students were trained to conduct brief cognitive behavior therapy in personal growth sessions within the research protocol. Facilitators were trained to use the chat room and survey functions of the University's secure remote classroom system WebCT.

Participants were randomly assigned to the face-to-face or computer-mediated condition. Facilitators conducted an equal number of sets in each condition but each participant was seen in only one of the two conditions. The demographic survey was conducted in the classroom during recruitment while the other four surveys were completed after the last of the three personal growth sessions in the WebCT survey site, whether the participant had been assigned to the face-to-face or computer-mediated condition. Facilitators completed two surveys after each set of sessions.

Process efficacy was measured with the Working Alliance Inventory (WAI), forms client and therapist. The WAI provides a score for total alliance, and sub-scores for bond, task, and goal, key factors in the development of a therapeutic milieu. Outcome efficacy was measured with a researcher developed Outcome Satisfaction Questionnaire with three scales, outcome satisfaction, computer skill level, and prediction of likelihood of future use of computer-mediated counseling.

The independent demographic variables, age, ethnicity and gender, were collected from the contact information form completed during recruitment. Learning style preference was determined using the C.I.T.E. Learning Styles Inventory and the Meyers Briggs Type Indicator (MBTI). Personality attitude preference – introversion or extraversion – was determined using the MBTI.

Significant main effects were found for the academic learning style systems and for gender. Significant interactions were found for gender by condition indicating that males reported greater process ability in the face-to-face condition contrary to a study hypothesis. No significant results were found for age, ethnicity, introversion/ extraversion or research condition. Recommendations for further research and clinical applications are discussed.

## CHAPTER 1 INTRODUCTION

At the dawn of the 20<sup>th</sup> century, the fledgling professions of psychiatry, psychology and counseling were beginning. As the 21<sup>st</sup> century begins a radically different service delivery method, which may in fact generate a radically new helping profession, is occurring. The current world population of Internet users is estimated to be around 349 million and growing (Stubbs 2000). A segment of these users are accessing mental health services variously known as Telecommunications, Telehealth, and Telemedicine. Telecontact, between a mental health provider and a mental health consumer, may simply be a plain old phone call, to reassure a patient that his or her medication has been called into the pharmacy; a copy of an e-mail of a typical interaction with a troublesome relative, which records the transactions while they are fresh, for processing in the next scheduled therapy session; peer moderated bulletin board support groups; video conferencing to train parents how to care for children with seizure disorders; live, interactive Internet dream work with a renowned dream therapist; or a very complex, surrealistic virtual reality counseling world. Computer-mediated counseling is in its infancy. However the generic and programming code necessary to bring it to maturity is already in place for interactive, graphic (sound, visual, and animated) virtual worlds where clients can choose avatars or symbols to represent themselves and to characterize the psychotherapy issues salient to their needs.

Although the technology and evolution of virtual reality are 30 years old, its application in counseling has not yet been significantly engaged. The virtual counseling world is the quintessential postmodern constructionist therapy environment. Fink (1999, pp. 28-29) reasoned, “computer-mediated communication (CMC), clearly a postmodern phenomenon, are a form identified by the mediator (the computer) as well as by the communicator (the virtual ego). The machine determines existence. . . . (u)sing present technology, CMC tends to be fluid, cycling, and devoid of social cues, which constitute modernity. Accordingly, psychotherapy that uses CMC is also amorphous, shifting in response to context, technology and the nature of patient interaction.” In essence, the counselor and client co-create the cyber counseling experience in the material processed - behavioral issues, distorted thoughts, troubling problems, faulty cognitions, overwhelming emotions – and in the very essence each participant chooses to contribute to the structure of the working space. Language, spoken or written, forms the connection between two people. Stanley (2001) argued that “rather than language being a reflection or mirror of social life, language itself constructs social life when it is practiced. Discourses produce different versions of this social life, different realities. The goal of discourse analysis then is not to improve upon people’s accounts, but rather to understand how they are practically achieved.”

Much of the power differential between client and counselor dissipates when each presents without the hallmarks of embodied age, race, gender, physical attractiveness, size and shape, native language, dialect, speech impediments, or peculiar mannerisms, which color and may distort face-to-face communication with preconceived stereotypes and subtle biases. For example, the researcher had a revealing chat experience with an

American living in Iceland. This was a personal recreational activity, not a professional relationship. While both were using an AOL Dream chat channel, the person in Iceland “popped-in” to the researcher’s screen via the private channel (instant messenger) when the researcher mentioned that she lived in Jacksonville, Florida. The person in Iceland had moved from Jacksonville Naval Air Station to the Iceland Naval Air Station and was lonely. The researcher was familiar with both geographic locations, both Naval Air Stations and with military-family life. The researcher *assumed* that the person with whom she was chatting was a young wife of an enlisted sailor. The chat contents were volcanoes, glaciers, lava beds, hot water lagoons, things to do in Reykjavik, Icelandic mythology, other exotic locations familiar to both. The researcher terminated the interaction when she learned that her cyber-friend was a 12-year-old girl. Nothing had ever been discussed that was inappropriate when talking with a child. Nothing had ever been discussed that the researcher had not discussed with hundreds of children that age during her career as a natural history museum curator; however, a personal bias of how, or when or for what reasons one related to a child had been violated (a surprising revelation to the researcher). The girl in Iceland had never claimed to be anything other than what she was — a situationally lonely and resourceful kid who moved all too frequently to become rooted in any conventional community, a person regardless of age who was interested in relationship, friendship, computer communication and natural history. One would think that age should not matter in this situation but it did. Most saliently, it is precisely for this population (the geographically isolated) that telehealth, telemedicine, and cyber-counseling are most strongly advocated. In the more formal setting of cyber-counseling, intake information would provide basic information — if the

client chose to respond accurately. However, in virtual reality one can role play age, race, gender, physical attributes and try on a vast range of solutions from which to select practical ideas to apply in his or her social-gravity bound life. The counselor in virtual sessions will not only be aware that the client may be role-playing but will need to develop new theory which promotes and capitalizes on a therapeutic world free from factors that often may actually be the source of the clients' distress. This radical new formulation of therapy may be analogous in the physical sciences to work done in space in the absence of gravity. Obviously one does not live long in the absence of gravity without serious physical consequences (e.g., loss of bone mass and tissue density). However, as a special condition to accomplish a specific end (e.g., re-growing tissue more quickly and with less pain) it has therapeutic advantages heretofore unavailable in theory or in practice. The powerful value of such study is clearly demonstrated by a global community's willingness to engaged in the high risk, construction of our third multibillion-dollar facility for such research — the International Space Station (preceded by Skylab and Mir).

Cyber counseling therapy in the absence of the weight and pressure of social markers allows a healing space, not a long-term residence for the client. Just as NASA researchers and their Russian counterparts must experiment and learn about the weightless environment available in near outer space, mental health researchers must experiment and learn about the social and relational weightlessness of cyberspace. Cyberspace then presents the constructionist need for a completely new theory of counseling, a completely new way of thinking about counseling, not just a new delivery system.

Entering cyberspace, then, disembodies the counselor and the client. In therapy in cyberspace, the nature of the interaction first deconstructs the everyday givens of the counselor and client, then the two co-construct a new healing reality through the therapeutic dialogue. Is that not the crux of psychotherapy - helping, guiding, facilitating, and coaching clients to discover, learn, or experience their story, their inner dialogue in a new, more self sustaining way? The major mental health professional organizations (National Board of Certified Counselors, American Counseling Association, American Psychiatric Association, American Medical Information Association, American Psychological Association, Commission on Rehabilitation Counselor Certification) agree that now, in the infancy of Internet counseling is the time to set the values, ethics and discipline of this new opportunity (NBCC 1997, NBCC 2001, APA 1997, AMIA 1998, ACA 1999, APA 2001, CRCC 2002).

Virtual Psychotherapy will have as little in common with the theory, context, content, and outcome of contemporary psychotherapy as contemporary psychotherapy has with priests and shamans. In the pre-modern or pre-science era, priests and shamans healed physical, emotional, and spiritual distress based on observations and beliefs about the natural and supernatural world, using plant materials, astronomical observations, beliefs about supernatural interventions and such. In the 1990s and 2000s these ceremonies continue but it is unlikely that Blue Cross Blue Shield or any other third party payer would assume financial responsibility for a Sufi whirling dervish, a Greek Orthodox exorcism, a Pentecostal spiritual slaying, an Episcopalian laying on of hands healing service, a Sunni (Lapland) sweat lodge, a Kiowa medicine wheel, a Lakota buffalo hide ceremony, Saginaw Chippewa eagle feature ceremony, yogi fire walking



treatment, or a Huichol peyote ceremony, even though these practices are far more ancient and continuous than modern psychology and have anecdotal efficacy (which, admittedly, is difficult to quantify). In the modern era of scientific understanding and explanations, physical illness and emotional distress have been dichotomized and spiritual meaning has been severed from the treatment arena. Postmodern disappointment with the limitations of science has revisited issues of holistic medicine, prayer, faith, sympathetic magic (e.g., crystals), imitative magic (e.g., smoke, feathers) and worldview in the relief of distress. The same is projected for the postmodern era and cyber counseling.

Notably, all pre-modern and modern treatments recognize the value of a helping relationship between the helper and the person seeking help, and a satisfactory outcome. The outcome must be satisfactory in many or most cases or the method would have become extinct, or at least superseded by major reformulation (e.g., trepanning to high technology brain surgery, leeches to lancing).

Disembodied, asynchronous, and globally accessible therapeutic models will expand the limits of thought and theory about the necessary and sufficient conditions of therapy and the nature of therapy. Language and overt self expression have always been the working matter of counseling — i.e., Freud's talking cure — however, language and imagination will predominate in cyber counseling and will require new conceptualizations of the essence of language in a polyglot world community (Shotter 1993). The language of the Internet is English, American English (Fink 1999). English is the lingua franca of commerce and science. Internet therapy were influenced, limited and contaminated for clients whose native language is not English even though they may

have learned English in a country or culture that places high value on knowing English and teaches it beginning in first grade.

English as a second language has been identified as a multicultural issue in counseling. How much greater will this issue become, in a global environment? Counseling laws, where they exist, tend to confine counseling to the state of the therapist's licensure; however, there are no International constraints. A potential client can be asked to affirm that she or he lives in the state of the therapist's licensure. However that does not mean that the person does, or if he or she does that he or she lives in an acculturated community. If a person's English or Spanish *appears* to be adequate to the counseling demands, can we assume that the person is keying in his or her comments directly through the computer, or is the client talking to a typist who enters the comments, or to a translator who must interpret both sides of the communication inadvertently and subtly changing each side. Web cam technology offers some solutions, or hope for solutions to the disembodied and perhaps linguistic problems posed in Internet counseling. An area of counseling is likely to evolve in the virtual reality model that is independent of physical and verbal cues.

Virtual reality models and virtual reality role playing have 30 years of history and refinement from the worlds of virtual gaming and virtual socializing. Fundamental issues of human presences, viability, efficacy, ethics, limitations, indications, contraindications, national and international licensing and liability and risks to clients must be thoughtfully discussed, debated and researched.

#### Scope of the Problem

Psychotherapists are using the Internet to provide a full range of mental health services. Powell (1998) surveyed licensed Internet counselors listed on the Metanoia

website. She learned that the 13 respondents served 445 clients in 1995, 947 clients in 1996, and 1344 clients in 1997. Over 15,000 health care related web sites were reported in 2000 (Dunaway 2000). While many of these are telehealth and referral, if only 5% are counseling and therapy sites, and if 1997 statistics are applied to that 5%, nearly 100,000 clients are presently receiving mental health services via the Internet in the absence of empirical data to support the efficacy of this service. Of Powell's respondents, 85% primarily used email for their Internet service; however 33% of these counselors had chat capability and none were using virtual reality technology. These figures do not include peer-moderated electronic bulletin board, peer-moderated chat rooms and private messages.

Counseling issues included relationship issues, depression, family issues, substance abuse, and anxiety (Powell 1998). In 2001, the organizers of the HealthyPlace.com website both list and recruit mental health professions, creating a network of referrals and some measure of credential verification. Members are encouraged to provide supervised web sites, called communities, in the areas of abuse; ADD/ADHD; addictions; alternative mental health; anxiety and panic disorder; bipolar disorder; chronic pain; depression; dieting; eating disorders; gay, lesbian and transgender issues; obsessive-compulsive disorder; parenting; personality disorders; relationship; self injury; and sex/sexuality. "Partners" are encouraged to manage a complete website, write a topic specific column, be the community's "ask-a-doc" columnist, maintain a journal/diary, manage an e-zine or write an Internet newsletter. Holmes (2001) whose screening appears to be more selective, has links to over 700 counseling sites The owners

of Psychnet.com sell mental health related domain and the tools to develop them at <http://www.psychnet.com>.

Concerned professionals began researching the Internet services, even before the Internet became available to the public in 1994 (Colon 1994). Professional organizations have been debating salient issues (Holmes 1997). The federal government has passed a telehealth bill (U.S. Congress 1997, HCFA, 1996, HCFA, 1999). In 1997 the state of California enacted the first state law restricting California therapists to in-state Internet clients (Maheu 2001). The American Counseling Association researched current practice in distance learning related to mental health and cyber counseling. A major recommendation from that study was the need for research in the area of cyber counseling (Brown & Walz 2000). Cyber counseling research must build the theoretical foundation and constructs of Internet communication and of mental health counseling.

### Theoretical Framework

The theoretic framework for this study consists of the constructs of social presence, (Lombard 1997, Reid, 1994), trustworthiness (Edwards 2000) and intimacy (Robson 1998) in cyberspace, counseling in cyberspace, person centered alliance building skills, brief counseling, learning styles, and personality traits. "Psychotherapy is a human relationship that heals" (Suler 1999). For a relationship to develop both participants must be involved in a personal, dynamic manner. Earliest theories of the Internet as simply an impersonal source of information were quickly replaced by the information foraging cognitive model (Priolli 1999), the sociological "gathering and communicating model" (Sproull 1997) and the anthropological expanding human experience: - understanding artifacts, and culture model (Mantovani 2001) to better reflect the evolution of Internet use and the experience of Internet users. The Social Presence Theory is a micro theory

that identifies six components of social presence, a prerequisite to interpersonal relationship on the Internet and, therefore, a prerequisite to Internet counseling -- social warmth, realism, transportation -- "you are there," "we are there," perceptual and psychological immersion, social actor within the medium, and medium as social actor (Lombard 1997). Almost all counseling theories emphasize the importance of the interpersonal relationship between the counselor and the clients, although they may vary in the manner in which they deal with the helping relationship, transference, counter transference, or working alliance. It is reasonable then to infer that social presence is a key concept for the development and evaluation of Internet counseling. It should be noted that several projects have attempted to create computer-as-counselor (Wizenbaum 1966, Maes 1995, Ookita, 2001). However, this study examines the human counselor client interaction with computer as communication mediator. Computer-mediated communications is not, in and of itself, psychotherapy, no matter how personal, rewarding, helpful and satisfying it may be. Hampton and Houser emphasized that "the Internet is a tool and it has no more inherent ability to cause harm than a telephone. Like other tools, if we use it properly, it will be helpful and beneficial. However, if we misuse it, the consequences will be detrimental (Hampton 2000)." A century of research and application have demonstrated that psychotherapy is a particular form of communication supported by heuristic theory, discrete techniques, and demonstrable outcome results. Now research must do the same for computer-mediated communication so that Internet counseling will be helpful and beneficial rather than detrimental.

This study was designed to contribute to that needed body of research. To do so, the study compared brief cognitive behavioral theory applied in personal growth

session's used in two conditions, face-to-face or computer-mediated sessions. Cognitive behavioral theory defines and describes salient constructs as cognitive events, cognitive processes, and cognitive structures (Meichenbaum 1988, Meichenbaum 2000). Cognitive events are conscious, identifiable or readily retrieved thoughts, images, and accompanying feelings. These events include internal dialogue, expectations, espoused beliefs, and appraisals. Cognitive events occur when the person's automatic behavior is interrupted, when one is uncertain about making a choice or judgment, when one is troubleshooting, and when one is exercising recall or reconstruction of an event or idea.

Cognitive processes are defined as the way a person processes information. These processes include information storage, search, retrieval and application. Cognitive theory suggests that information is received, encoded, stored, retrieved and applied to a given situation based on the beliefs and values of the individual. That is, not all possible information, which one encounters, is stored or retrieved. There is a selection process based on salient beliefs and values. An artist, for example, may store shape, form, color, light, and texture information extant in the everyday world, which others would miss entirely. The artist can retrieve that information in another setting because it is relevant to his or her worldview. At least three of these cognitive processes, confirmatory bias, mental heuristics, and meta-cognition, are important in psychotherapy. Confirmatory bias is a process by which the person stores and retrieves information that confirms a belief or value without questioning the underlying belief. Using this process, the individual filters out any contrary information or ambiguous information, denying that individual necessary information in the current situation. Mental heuristics are processes or templates for making decisions in ambiguous situations. Stereotyping is a common

mental heuristic. Meta-cognitions are ways of thinking about and controlling cognitive processes. Scarlett O'Hara's "tomorrow is another day" or little orphan Annie's "the sun will come out tomorrow" are meta-cognitions, cognitive processes or templates that automatically inform that believer to ignore today's disappointments, fears, worries, and concerns because they were gone tomorrow. Cognitive structures or schemes are templates that are pervasive, readily accessible, and reflect personal themes.

Each theory of psychotherapy has generated techniques or procedures, that use, operationalize, and/or apply the theory in concrete situations with particular clients. Beck and his colleagues (Beck 1979) emphasized that cognitive behavioral therapy is collaborative work, which begins with rapport. To develop this working relationship, they recommend that a good base for building of rapport is simple courtesy — not keeping the patient waiting, remembering important facts about him, and giving a sincerely warm (but not effusive) greeting. Maintaining eye contact, following the content of the patient's talk, trying to infer and reflect the patient's feelings, and phrasing questions and comments diplomatically help to build rapport. The choice of words and labels is important (p. 53). For example, "non-productive ideas" is preferable to "neurotic," "sick," or "irrational" thinking. The working relationship in cognitive behavior therapy, however, is more than rapport building, which can be accomplished in a hierarchical relationship as well as in a collaborative relationship. In a cognitive behavior therapeutic relationship, the therapist and patient work together to determine how and what the patient thinks, the basis for such thinking, and the practical benefits and losses that result from such thinking. The patient's unique contribution to this collaborative effort is to provide the raw data for this inquiry, that is, to report his

thoughts, feelings, hopes, dreams and wishes. The therapist's special contribution is to guide the patient about what data to collect and how to utilize these data therapeutically (p. 54). Other collaborative techniques include "authenticating introspective data", "investigating underlying assumptions," "setting up experiments", and "homework assignments" all of which are conceptualized as making the client his or her own 'folk' scientist whose research is focused on his or her own best interest, personal problem solving and successful living.

The process of therapy and the outcome satisfaction as reported by both the participant and the facilitator were evaluated to determine the efficacy of computer-mediated counseling. A therapy outcome is related to both what happens during the therapeutic process and what the participants bring to the process. This study examined cultural factors and personality traits that the client brings to the therapeutic process, gender, ethnicity, learning style, and personality traits.

Learning style theory, an operational application of information processing research, is an important construct that identifies inherent learning strength and examines differential sensory and social ways in that people prefer to learn and learn most successfully (Babich 1976). Personality traits or the hard wiring of individual differences in attitude, response to the stimuli, collection of information from the world and source of energy and authority were simultaneously suggested by Jung and by the mother daughter team, Myers and Briggs. Myers and Briggs (Myers 1962) operationalized Jung's theory in the Myers Briggs Type Indicator (MBTI). Of particular interest in this study is the introversion/extroversion scale, because Reid (1994) and Fink (1999) each suggested that computer-mediated communication favors those with an introverted attitude. Jungians



have researched temperaments and their contribution to the manner in which people prefer to learn either in a formal educational setting or in life in general. This more pervasive learning style was examined as well as the academic specific learning style developed by the Wichita Public School System. Computer-mediated communication, computer-mediated social presence, cognitive events, cognitive processes, cognitive schemas, learning style, personality type, and working alliance are the major constructs that form the theoretical foundation of this study.

#### Statement of the Problem

It has long been the *sin qua non* of the helping professions to "Do No Harm". Clients seek counseling because they perceive it offers hope, help, assistance, and guidance in a time of confusion, pain, loneliness, or danger. Professional and governmental agents exist to assure clients that the professional from whom they seek help is trained, qualified and practicing in a safe and proven manner. Insurance companies and other third party payers often refuse to reimburse any treatment that is considered unproven or experimental. When new methods are developed, they must be reproducible and scrutinized by the professional community to insure that they are safe and effective. It cannot be assumed that when there is major change in the manner in a service is provided, the therapy is identical to previously validated methods. Internet counseling must meet the same standard of applicability and efficacy that is required of all other modes and forms of counseling. Research must inform clinicians regarding appropriate selection of clients who are likely to benefit from Internet counseling and must demonstrate useful theory and techniques in the cyberspace-counseling environment. One size does not fit all, and one technology certainly does not fit all.

### Purpose of the Study

The purpose of this study was to compare and contrast the development of working alliance (Horvath 1993, Horvath & Greenberg 1986, Horvath & Mars 1991, Horvath & Symond 1991), and outcome satisfaction with traditional face-to-face brief group counseling and with computer-mediated brief group counseling. The effects of learning style (Babich 1976) and personality traits were analyzed to determine if potential differential efficacy of face-to-face or computer-mediated counseling could be predicted. The study will examine which, if any, specific learning style and personality traits are predictive of success in one modality or the other.

### Need for the Study

Few studies exist to guide psychotherapists who decide to move all or part of their practice to the Internet. Most of these studies are surveys and other qualitative studies as is appropriate for developing heuristic for a new area of inquiry (Barak 1999, Colon 1994, Dunaway 2000, Fink 1999, Harris-Bowsbey 2000, Stubbs 2000). Virtual Reality (VR), the high end of Internet technology is being studied with statistical rigor in the treatment of phobias (North 1994, Rothbaum 1997), cardiac illness in children (Bers 1997), and chronic pain at a burn clinic (Patterson & Hoffman 2000). Ethics working papers and guidelines exists to structure Internet psychotherapy (NBCC 1997, ACA 1999, AMIA 1998, APA 1997, Brown & Walz 2000, Holmes 1997, NBCC 2000, CRCC 2001) and there is no dearth of technology and technical assistance to develop and market Internet therapy. There is however, a critical need for empirical research to analyze typical Internet therapy after almost a decade of development.

The primary therapeutic use of the Internet appears to be Internet support groups (King 1998). Because of this widespread use, the American Psychological Association

conducted an Internet support group symposium at their annual convention. Barak and Wander-Schwartz (1999) report one of the only studies of Internet therapy. They describe their study as preliminary, warned that its findings should be interpreted with caution and called for intensive research. Several professional and scientific questions of relevance include: Is Internet therapy useful, beneficial, satisfactory, and efficacious? Is Internet therapy harmful? Does Internet therapy immunize potential clients to effective face-to-face treatment? Is Internet therapy a technology placebo? Is Internet therapy "snake oil"? Do the personality traits of the client influence the effectiveness of Internet counseling? Is the Internet, as one author suggests, "revenge of the introvert?" Is a visual learning style more conducive to effective Internet results than a verbal learning style? Does the physical isolation of computer-mediated psychotherapy hamper the success for clients with social group learning style preference? These are but a few of the questions that need to be considered, especially if the cyber client is to be provided with appropriate services, the psychotherapist is to remain in compliance with his or her professional ethics and credentials, and if the insurance industry is to recognize and reimburse Internet therapy.

#### Rationale for the Study

This work contributes to the foundation for the lower end technology interface. It will benefit counselors who wish to work well and ethically Internet. With this and similar research, counselors will have tools to determine which clients are best served by Internet counseling, and which clients need to be seen face-to-face. It will benefit clients who are geographically or situationally isolated from counseling services to be able to make an informed decision about Internet counseling. Since the federal government health benefit program has long supported some forms of telehealth and telemedicine as a

cost- containment means, a strong research effort is needed to support the claims of counselors and clients for third-party payment.

### Research Questions

The following six research questions were examined in this study:

1. Is brief, Internet counseling as effective as brief face-to-face counseling?
2. Does working alliance develop equally well in brief, Internet counseling and in face-to-face counseling?
3. Does the information processing style (visualizing/verbalizing) of a participant influence the effectiveness of Internet brief cognitive counseling?
4. Do personality attitudes (introversion/extroversion) of client affect the efficacy of Internet brief cognitive counseling?
5. Does the ethnicity of the client affect the efficacy of Internet brief counseling?
6. Does the gender of the client affect the efficacy of brief cognitive Internet counseling?

### Definition of Terms

#### Counseling terms

Learning style — the sensory and social process by which an individual acquires, encodes, stores, and retrieves information, including visual, verbal, kinesthetic, tactile, social-individual, social-group, expressive-oral and expressive-written (Babich 1976).

Personality Traits — as defined by Jung (1923) these are psychological functions of thinking, feeling, sensing, and intuiting, which interact with attitudes of introversion and extroversion. Myers (1962) added the constructs of judging or perceiving (cf. MBTI). Each individual has preferred functions and attitudes that he or she generally prefers to use to collect information about, and interacts with his or her intrapersonal and interpersonal environment.

Working Alliance — the therapeutic relationship that develops in the counseling environment to facilitate success. Three components of the working alliance are the bond between client and counselor, mutual agreement on the goal of therapy, and mutual agreement on the tasks of therapy that will accomplish the goal (Bordin 1976).

### Computer Terms

Synchronous — (antonym asynchronous) means happening at the same time or moving at the same rate of speed or having the same rate and phase as vibrations (Gurainik 1979).

These are key concepts in Internet communication and refer to the ability of people to communicate at the same time (synchronous) from any computer in the world or near outer space or to communicate at different times (asynchronous). Examples of synchronous interactions are text chat and media chat. Email and bulletin board discussions are asynchronous. (Suler 1999).

Chat — real time, live, or synchronous text conversation between two or more people located at a computer keyboard anywhere on the planet or in near outer space. (Young, 1998)

Cyberspace — a term coined by science fiction writer William Gibson (1984) to describe the space that exists between people, computers, satellites and phone lines

E-mail — generally one to one written “letters” but courtesy copies, blind courtesy copies, and group mailing are also common (Young 1998).

Encryption — applying mathematical algorithm to plain text to produce apparently unintelligible text for security purposes during transmission (Smith 1997).

Telehealth/telemedicine — developed originally by NASA (2001) in the early 1960's to provide health care and monitoring for astronauts, beginning with Project Mercury. It

provides assistance in disaster stricken areas throughout the world and applies space-based technology to terrestrial medical care.

URL — the address or location of information on the Internet. The acronym stands for Universal Resource Locator (Young 1998), although Berner-Lee (2000), a particle physicist who created the World Wide Web, originally used URI for Uniform Resource Identification and the terms are often confused because the URI is still used for addresses on the Internet outside the worldwide web. The URL of a popular search engine for example is <http://www.google.com>. While most clients will see the URL, the direct form is <http://216.199.19.139/> the URI of a small business in Jacksonville. An email address is not a URL or a URI but rather a hyperlink to a section (bin) within the service provider's website.

Virtual Reality (VR) — immersion technology currently being used at MIT and elsewhere to treat pain and phobias. VR is a graphic and animation rich computer environment, which simulates visual, auditory and tactile sensations. For microcomputers, (PCs and Macs) VR uses MOO (MUD Object Orientation) virtual reality programming code that allows the creation, use, and manipulation of items on the screen. MUD is Multi-User Dungeons, (now also Multi-User Domains, Multi-User Dimensions) a virtual world originally developed in the 1970s and 1980s for playing adventure role-playing games. MUSH is Multi-User Shell, a programming system that allows users to develop and manage either an adventure or a social MUD (Bruckman 1995). This technology can potentially be used to develop VR counseling from any computer given adequate bandwidth and baud rate to both the counselor and client computers.

### Organization of the Study

This study consists of five chapters, an abstract, three appendices, and a list of references. The abstract and introduction present the Internet and counseling context for the study describing research issues of the growth and professional concerns about Internet counseling. The second chapter reviews relevant scholarly literature on social presence, Internet counseling, face-to-face brief counseling, working alliance measures, outcome efficacy measures, learning styles and personality traits. The third chapter describes the structure of the study, characteristics of the participants, dependent and independent variables observed, measures used, and statistical procedures applied to analyzing the results of the experiment. Chapter four presents the statistical results and chapter five discusses the significant results, potential impact to Internet counseling, limitations of the study, and recommendations for Internet counseling and further research. The appendices contain forms and measures created for this project, protocol for facilitator training and sessions, and a sample computer-mediated session transcript.

## REVIEW OF LITERATURE

The relevant scholarly literature is reviewed in this chapter. Topics to be reviewed are research; Internet computer counseling concepts; Cognitive counseling theories; personality traits; temperament learning style; academic learning style, and counseling outcome and process theory. The existing Internet research, which is primarily qualitative and heuristic, addressed the social and cultural dimension of Internet transaction and the construct of social presence on the Internet, a prerequisite to counseling. The advantages and concerns about Internet counseling as discussed by the mental health professional organizations and activists, and current applications of counseling on the Internet. While outcome efficacy of Internet counseling is a concern in all theoretical approaches, for the purposes of this study, the theory used is brief cognitive behavior therapy. Research regarding basic precepts of cognitive behavioral therapy, basic precepts of brief therapy and the construct of working alliance are reviewed. Relevant research about personality traits, theory and application of learning styles are discussed as related to independent variables in this study. The theory and instrumentation for evaluating the independent (personality type and information processing style) and dependent (working alliance and outcome) variables are presented. This chapter concludes with a discussion of the contribution of the existing research to the formulation of the present study.

### Internet Counseling Basic Constructs

To counsel in cyberspace, one must first assess the constructs and theories defining human relations in cyberspace. Counseling is a human interaction, which is a



good deal more complex than ordering a book from Amazon.com or a rose bush from JacksonandPerkins.com. Is there a subjective component to human interaction in cyberspace? Is there a “person” or “psyche” to counsel? Three major concepts have been discussed at length - social presence, trustworthiness and intimacy. These factors create an environment in which a therapeutic alliance can be developed. One of the three essential components of a therapeutic alliance is the development of a personal bond. Social presence, trust, and intimacy or self-disclosure, create the milieu in which a personal bond can develop between the therapist and client. The client and the counselor need to experience a sense of bond, connection, or rapport. The bond can be based on the sense of mutual trust, liking, understanding and care (Bordin 1976, Horvath & Greenberg 1986).

#### Social Presence.

Is there social presence in cyberspace, and if so, how does it manifest? In response to the gamut of pressures emanating from the war in Viet Nam and the Cold War, government, military and related universities developed the technology to deliver information around the world and into near outer space almost instantly. At the same time, social, political, humanitarian and radical thinkers were developing experiments in human living that were just as dramatic. The social geniuses of the era readily adapted and defined the ultimate use of the Internet. Rheingold (1994) was perhaps the first social thinker to systematically describe the social and cultural communities that developed on the Internet. The WELL, a San Francisco founded, Internet community dating from the early 1980s, grew out of the social activism, communal living experiments, and democratic philosophies of the 1960s. The personal involvement and

real life connection among members is illustrated in the following two incidents. The WELL community organized a massive medical resource location, medicine delivery, and member return transportation from India to San Francisco when a former member who had become a Tibetan nun developed a rare liver condition and was destined to die in India without this heroic, real time, real cash, real resource, unbidden, but greatly appreciated massive intervention (28-32).

In another case, a prolific member of the WELL committed Internet suicide, the act of removing all of his years of comments and conversations written into the fabric of the community. Alert members of the community called him, assured that he sought and received professional help, and notified his family and other friends. In the end, the effort was insufficient and the member committed real world suicide. Rheingold mused

“Suicide brings up unusual feelings in any family or social group. Fortunately, there were one or two among us who knew exactly how to understand what was happening to us: a fellow who had struggled with years of feelings over his brother’s suicide was able to offer wise and caring and credible counsel to many of us.

There was a real-life funeral, where we brought our physical bodies and embraced each other and Blair’s family. We were learning how fond we had grown of Blair, and how his death put a milestone in cyberspace. Marriages had happened and others had unraveled. Businesses had started and failed. We had parties and picnics. But death seems somehow more real, even if your only participation is in the virtual funeral. How could any of us who looked each other in the eye that afternoon in the funeral home deny that the bonds between us were growing into something real? The feelings ran just as high during the virtual part of the grieving rituals as they did during the face-to-face part - indeed, with many of the social constraints of proper funeral behavior removed, the Internet version was the occasion for venting of anger that would have been inappropriate in the face-to-face gathering. There

were those who passionately and persistently accused the eulogizers of exhibiting a hypocrisy that stank unto the heavens, because of our not altogether charitable treatment of Blair Internet when he was alive.

Those of us who had made the calls to Blair and his shrinks, who went out and met his brother and his mother and tried to provide them some comfort, had a different attitude toward those who couldn't bring themselves to attend the painful event in person but didn't hesitate to heckle others Internet. People who had to live with each other, because they were all veteran addicts of the same social space, found themselves disliking one another (p. 37)."

And . . .

"There has always been a lot of conflict in the WELL, breaking out into regular flamewars of interpersonal attacks from time to time. Factionalism, Gossip. Envy. Jealousy. Feuds. Brawls. Hard feelings that carry over from one discussion to another (p. 53)."

Thought, feelings, and behaviors are the raw materials of counseling.

Rheingold's experiences provide poignant insights into the thoughts, feelings and behaviors Internet and in the real life of a multinational, Internet, social community.

From social psychology, the construct of disembodied engagement and personal interaction over the Internet has been named "presence". Lombard and Ditton (1997) identify presence as the sense that mediated experience (computer, simulation rides, home theater, video conferencing) is natural, immediate, direct, real and unmediated. This qualitative factor of mediated communication is crucial to community building and counseling. "An enhanced sense of presence is central to the use, and therefore the usefulness and profitability, of the new technologies... These technologies either are now changing or are expected soon to change many of the ways we work, play and live (p. 2)." Social presence theory was studied early in the advent of mass, affordable access to electronic media and continue to be important in social psychology and mass communication research.

Cyber feminist Plant (1996) warned that the Internet disembodies, degenerizes and promotes yet another form of oppression. Stanley (2001) and others (McLuhan & Friore 1967, Billig 1996, Shotter, 1993, Turkle, 1995) countered that language embodies the authentic self and depoliticalizes the communication. Stanley disputed the concept of virtual space saying, "a social space (is) constructed through which embodiment could be revealed. This reality is "real space," the space that is on the other side of the screen . . . real space constitutes the embodied practice of social talk (p. 77)." He suggested interpersonal life is a dynamic performance of language constructed in speaking and writing, not in thinking or holding unexpressed opinions and attitudes. "Rather than language being a reflection or mirror of social life, language itself constructs social life when it is practiced. Discourses produce different versions of this social life, different realities (p. 79)." Stanley works with international students for whom life with family and friends of necessity is text based. He analyzed the text-based interviews with distant students/participants and identified recurring themes. Quotation marks are used to signal 'stake' and 'accountability. Subjectivity and reality, marked by the use of "hummm" and "erm", Stanley noted is "an archetype of phonetic space (that) has been appropriated for use in cyberspace (p. 86)." He found that the bodily presence of the person using the Internet is present in the use of emoticons (emotion icons) and by typing speed, pauses, and deletions. Language itself embodies in metaphorical phrases. Boechler (2001) makes much the same argument from a cognitive process and concept point of view.

Much of the debate over presence and embodiment (Harris-Bowlsbey 2000, King & Moreggi 1998, Laszlo, Esterman, & Zabko 1999, Miller 1995, Plant 1996, Powell 1998, Reid 1994, Suler 1999, Walther 1996) has or needs to examine how presence,

emotion and embodiment are incorporated in text-based communications. Letters, missives and discourses were the major form of communication from the invention of writing at least as early as 5,000 B.C.E. until the invention of the telephone, telegraph, and radio in the last 19<sup>th</sup> century (Bell 1867, Bell 1895, and Marconi 1900). The most common and wide spread convention for expressing emotion on the Internet is the smiley or alternately the emoticon. Early on, the need to encode and convey feelings was recognized in the computer chat space. Carnegie Mellon Principal Research Scientist, Scott Fahlman, (1995) admits

“Yes, I am the one who first suggested the use of the :-) and :-( glyphs in E-mail and board posts sometime around 1981. People were making sarcastic comments in posts, others were taking them more seriously than they were intended (no body language on the net), and silly arguments were breaking out. So I suggested on one of the CMU boards that people explicitly label comments not meant to be serious with a :-) glyph. Very quickly, this idea spread all around the world and others started creating clever variations on the theme. The awful term “emoticons” is much more recent.”

These glyphs (see Z’Boray 1997) are an important part of routine Internet socializing but are inadequate for expressing the range of non-verbal cues necessary in counseling. Other rules of appropriate behavior (netiquette) on the Internet also evolved to smooth social interactions (Rinadli 1998) and should be observed by the cyber counselor but like glyphs, netiquette is not sufficient for the needs of the counseling relationship. The introduction and development of glyphs and netiquette demonstrate that the need and convention was recognized early in the development of text-based communications.

Cyber counseling specific conventions have been developed and need to be researched, developed, enhanced and expanded. Murphy and Mitchell (1998) developed a three-component convention to provide a text-based alternative to the non-verbal cues in traditional counseling. Technique 1 is called “emotional bracketing”. In the text of an email or other text-based communication, the writer puts the emotional tone of his or her thought in parentheses (p. 24). For example, a therapist may be concerned because the client mentioned his car was stolen then skipped without elaboration to another topic. The therapist might write. Let me interrupt here and return to your mention of your car being stolen (concern, puzzled). What have you had to do as a result . . . police, public transportation, . . . ? I know you frequently have to take your aunt to doctors’ appointment (proud of your commitment)? How are you coping (knowing you have)?

The second tool or technique Mitchell and Murphy developed is called alternatively “textual visualization” or “descriptive immediacy”. They provided the following example:

“If you were standing beside me as I write this, Tanya, you would notice me stopping often, falling back against the back of my chair saying “that’s incredible” to myself. Your recent successes against guilt are so wonderful that even now I find myself (right now!) Stopping in the middle of the sentence, my hands towards the computer screen, my mouth wide open as if to say “this is amazing. How did she defeat guilt?” (p .24).”

Third, Mitchell and Murphy encouraged the conscious, deliberate use of literary tools simile, allegory, metaphor, poetry, story telling, and mythology commonly used in face-to-face therapy. These techniques have expanded the repertoire available to therapists well beyond the effective but static emoticon or smiley, for expressing

emotional context, for making content explicit and for making the here-and-now process comments so vital to counseling, in text talk.

Another equally interesting concept is “hyper-personalization”. Walther (1996) introduced the concept of a reinforcing feedback loop, which he called an intensification loop. He suggested that a person can project his or her idealized self into the communication and be reinforced for that idealized self, increasing the realization of that ideal in their daily off computer life via ego strengthening. He also suggests that when communicators do not have to pay attention to social cues they pay more attention to the text and its meaning. He did not, however, discuss whether this enhances or distracts from therapy.

Patterson (2000) and Riemer-Reiss (2000) each reviewed Internet rehabilitation service delivery and concluded that the Internet offers accessibility, immediacy, advocacy, and competency for rehabilitation counselors and their consumers and also challenges and ethical considerations. Patterson mentioned the availability of vocational information, Department of Labor Statistics, job banks, placement resources, medical information, free or inexpensive assessment tool (e.g., Keirsey Type Indicator, Career Interest Game, Career Key, Birkman Method Career Style Summary and the Self Directed Search), support groups and continuing education. Patterson advised “judicious” use to complement the work of human interaction.

#### Mutual trust or trustworthiness

Trustworthiness, consisting of dependability, reliability and honesty, is essential to a good counseling relationship (Ainesworth 1995). These mirror the qualities Roger’s (1957) included in what he considered necessary and sufficient conditions for person centered therapy to be effective. Trustworthiness, on the Internet has been researched by

Cheskin Research and Studio Archetype/Sapient (1999) because of it is vital component in ecommerce. Web site and email security were discussed in length below because cyberspace is mysterious to many users and because privacy, confidentiality and credibility are essential factors for instilling a sense of trust.

### Intimacy

Intimacy, in a clinical sense, has to do with the amount of self-disclosure exists in a relationship (Robson & Robson 1998). As a relationship develops and matures, the amount of self-disclosure increases and expands. For counseling, self-disclosure is essential. Self-disclosure must be monitored. Too much self disclosure, prior to sufficient development of presence and trust, can rupture a budding relationship just as too little disclosure later in a relationship can regulate it to distant, formal, casual and atrophying because it lacks depth and richness.

Social presence, mutual trust and adequate and appropriate intimacy or self disclosure exist on the Internet and are richly communicated through email, chat rooms, bulletin boards, and multi- user domains. This research (Sproull 1997, Robson & Robson 1998, Barak 1999, Suler 1999, Mantovani 2001, Stanley 2001) is fundamental because without these factors, counseling could not realistically expect to develop a human relationship and personal bond needed for a therapeutic alliance to move the therapy to a satisfactory outcome.

### Internet Counseling Issues

#### Website Security

Counseling room security is a significant concern especially in university teaching labs and public clinics where sound readily passes through the walls. The problem of "eavesdropping" escalates on the Internet. Electronic transmissions are most vulnerable



to security breaches at their origin and at their destination. In transit, the message consists of binary code that has been broken into several “packets” each of which travels the Internet independent of the other. At the destination, they are reassembled and checked for completeness.

Security should be applied at each end point where the message is complete and readable but the counselor can only control his or her end of the communication. It seems obvious that therapy should not be conducted from the client’s employer’s computer or from a public computer (library, computer café, etc.). Ironically, these sites may be the client’s only Internet access. Law and legal intervention cannot secure wireless connections to the Internet. Hardwired cable modems or DSL cables are also at risk because they establish a permanent address for the computer access rather than a new one with each dial up making the connect susceptible to deliberate attack. Dial up connections are vulnerable to disruption of service. The client and therapist each have to be responsible for common sense and security on their respected ends of the transmission.

Grohol (2001), who credits himself with creating the term “e-therapy”, claims that e-therapy is more confidential and secure than traditional psychotherapy citing thin walled clinics, and patient charts available to clerical personnel as evidence of lack of security in a traditional office or clinic. Grohol does have a point to the extent that unless a therapist sound proofs his or her therapy room, encrypts all telephone calls to patients/clients, and checks the office regularly for surveillance devices, does his or her own transcription, copying and filing, and so forth, most Internet psychotherapy is as secure as its face-to-face counterpart. Workers Compensation required that all case notes relevant to the injury be copied and submitted with the request for payment. How secure

is that? Physical security is the most crucial place to insure office or Internet privacy and confidentiality. (Smith 1997) In recent spy scandals, the main issues involved missing disks, missing laptop computers, and missing hard drives, not Internet or Intranet security.

Encryption (Smith, 1997) offers the second mode of protecting Internet privacy but has no application if one uses a cell phone or wireless Internet connection (encryption is legally defined as a munitions in the USA and 40 other countries). Ironically, it is the geographically remote who rely on wireless communication. The average user can connect to the Internet in one of three ways. Dial-up connections use regular telephone lines. In remote areas, some telephone lines still use analog (rotary, pulse) system and cannot dial up an Internet Service Provider (ISP). Television cables offer another way to connect to the Internet, but cable television is likewise not economically feasible for the companies in remote areas and therefore not available to one of the most under served populations. Dish satellite is available in remote areas but because it is wireless, it cannot be legally encrypted. Most high-speed Internet connections rely on microwave towers and as a result are wireless even when offered by the local telephone carriers. Cable high-speed Internet connections are probably the only DSL connections that use physical wire. Internet security is a matter of therapist knowledge and proper application of both hard ware and software solutions (Smith, 1997). T-4 lines are the most secure, most expensive, and least available to the average therapist. Furthermore, even if the therapist has a secure high-speed connection, the actual communication between a therapist and client can only proceed at the rate of the slower system.

The issues for email, chat, and bulletin board security include authentication, non-repudiation, public key distribution, and mailing list handling (Smith 1997, p. 287-296). Authentication asks “who wrote the message” did the therapist write the message the client receives, did the client write the message the therapist received. Non-repudiation is important in legal matters, commonly business contracts but, for the therapist and client in potential lawsuits -- divorce, custody, criminal, and malpractice. Public keys are passwords and other encryption devices use to allow discretionary access to information. Mailing list, (e.g., listserv, USELIST) are difficult to encrypt because the decryption must be specific for each receiver.

Cryptography and secret codes has a long history in government, intelligence and military use but equally if not more importantly in business and commerce. Modern cryptography has been spurred by the business and commercial needs of the Internet and by major advances in modern mathematics that provides the means to develop nearly indecipherable code algorithms. The therapeutic community is rightly concerned about privacy and confidentiality. However, “hacking” or breaking into a properly secured computer system, is actually very difficult, rare and targets valuable and marketable sites. With this caveat, the therapist is wise to encrypt his or her site for the protection of the therapist/client communication and use a third party secure payment company, which specializes in the coding/decoding in monetary transactions. This protects both the therapist and the client from external credit card fraud, exploitation, and subterfuge. It is the most complex, expensive and restrictive form of encoding. Companies exist to handle financial transactions because the ordinary transactions of many businesses are not worth the time and trouble required to intercept or forge them. It is a much better

business strategy to hire out secure credit card processing than incurring the expense and risk of doing it in-house.

Mitchell and Murphy (1998) recommend that all e-mail be encrypted but agree that it may be too anxiety producing to ask of a client seeking professional help to acquire and learn to use an encryption program (p. 52). E-mail can be encrypted with free or inexpensive software but it only works if it is installed and used properly. PGP (Pretty Good Privacy) encrypts both e-mail and files for a one-time cost. The software "plugs in" to common email programs such as Endora or MS Outlook, to encrypt files, disks and existing email on a hard disk. ZixMail is a secure email application, which downloads free but requires \$1 per month payment. Zip-Lip and HushMail are both free secure web messaging services. Messages remain on the server so they cannot be intercepted. Nothing is stored on the clients' computer or the therapists' computer (HON, 1995). The major concern about the use of encryption software is not the quality and usefulness of the software, but the misuse or inappropriate use of the software (Smith, 1997).

The electronic security issues, technological failures and access have as long a history of research and development as do research on therapy relationships and outcome efficacy (Wright & Greengrass 1987). Electronic security is directly related to ethical issues of privacy and confidentiality. While news media seem to frequently report breaches of electronic security, a close examination of recent espionage incidences reveal that most involve an insider (Lee, Ames, Hansen) who has direct, physical access to the hard drive, server, stolen laptop, software, encryption/decryption devices or paper files. Virtual Private Network (VPN) is the concept of using private computers (desktop,

laptop, mainframe or server), firewalls, public servers, the Internet and the client's personal computer (Barlow 2001, Fratto 2000).

Certification authority issue digital signatures after performing background checks to assure that the company certified is what it claims to be. The personal digital signature certificate verifies that the user is who he or she claims to be. Loss or misuse of a digital signature certificate has serious consequences, comparable to loss or misuse of a passport. A digital signature is also analogous to a business or occupational license and bonding.

### Legal Considerations

State licensure and states rights are the key legal issues in Internet psychotherapy. Federal and state laws regulate Telemedicine (Congress 1997, HCFA 1996, HCFA 1999). Interestingly, both California and Minnesota have passed laws allowing reimbursement for telehealth services (Jones 1996a, Jones 1996b). California (Maheu 2001) has also passed an Internet psychotherapy law restricting practice to in-state clients. Case Managers, rehabilitation counselors, and nationally certified counselors in states without licensure may be relatively safe practicing under their national certification. There is ultimately no way to know if the person with whom the therapist is communicating is physically located in a state or nation where the therapist has a license or certification. As a result, much of the experimental research on Internet psychotherapy is being conducted in Israel (Barak 1999, Barak & Wander-Schwartz 1999), Australia (Reid 1994, Smith 1997), and Canada (Murphy & Mitchell 1998, Mitchell & Murphy 1998).

Dunaway (2000) discusses both jurisdiction and malpractice insurance issues "The potential for out-jurisdiction counseling is another hurdle faced by e-therapy. State licenses restrict providers to practice within a state, but patients on the Internet can reside

anywhere. This is an unsettled area, so it is smart to take a conservative approach until further guidelines are developed.” She advised, “generally speaking, unless there is a specific disclaimer in the insurance policy, the carrier would have difficulty denying coverage for malpractice claims for work within the scope of mental health treatment by a licensed psychiatrist.” Therefore, a licensed professional may be covered for liability while practicing on the Internet but geographic scope of practice area is a concern. Grohol however points out, sadly, that licensing boards are infamously inactive in pursuing complaints and taking action against licensed professions. His advice is to practice within professional ethical guidelines and within one’s expertise and let case law evolve (Grohol 1999a).

### Modalities

#### Telehealth/Telemedicine

The American government and military interest in the Internet included all aspects of defense including the health and care of personnel in remote areas. Telehealth/ Telemedicine is the branch of Internet use and research that provides electronic healthcare to military and civilian populations who lack readily available geographic access to medical care.

#### E-mail

Therapy via e-mail is currently the most widely used form of Internet mental health service outside Telehealth/Telemedicine, and the most accessible to clients and therapists. E-mail was an after thought of Internet developers who found it convenient to communicate with one another involved in a complex project design. It requires minimal bandwidth and can be accessed with an “appliance” for those who cannot afford a computer. E-mail service can be obtained from several free sources.

Murphy and Mitchell (1998) developed techniques described above and wrote about their qualitative observations from conducting therap-e-mail on their web site <http://www.therapyInternet.ca>. They required potential clients to complete and return an on line form called the Virtually Solve It worksheet, which can be completed off line. They believed that the permanent record of email makes consultation and supervision easier. A response can be reviewed by the supervisor, consultant or peer prior to being sent to the client (p. 26). The permanent potential of email encourages the therapist to be thoughtful and behave in an ethical manner (p. 27). Clients found that filling out the VSI and writing out their interactions with the therapist externalized their problems making them easier to confront and resolve (p. 27). Repeated efforts to obtain this form were unsuccessful, so it appears no longer to be a viable web service, however Grohol's site is active and has pre-therapy form at <http://psychcentral.com>.

Mitchell and Murphy recommended that further research should be conducted to study the impact and effectiveness of their techniques (emotion bracketing and textual visualization (descriptive immediacy); application of narrative and solution focused therapy in face-to-face and electronic therapy; impact of writing itself in the therapeutic process; and pre-treatment effect of writing to the therapist (e.g., using the VSI)( p. 30)

Chat/Conferencing

Suler (1997) describes text talk as austere because it lacks voice, facial expression, body language and visual/spatial environment. While some may find this disorienting, he suggested that for many, text-talk is a more direct, intimate mind-to-mind communications approximating an internal dialogue. In his study, Suler analyzed "many megabytes" of saved logs exploring the concerns that the absence of visual and auditory cues confuse users, and lead to painful misunderstanding. He identified

phenomena of text-based conversation. There is often a lag in live messages due to Internet connection speed. He called these out-of-syn occurrences, temporal hiccups. This can seem similar to talking over another person in face-to-face conversation. The Internet therapist will need to determine whether he or she is viewing a temporal hiccup or an interpersonal issue. Most chat modes providers, including AOL and WEBCT (used in this study), allow for only a line at a time text entry (plus cut and paste for large pieces of text). Correspondents don't actually see what the other is typing until it is published using the enter key. ICQ in live mode however allows for a more natural ongoing conversation limited only by the speed/skill of the typist. Writing is live rather than written then sent. There is software that allows one speaker to complete a lengthy thought before the next message posts and was used extensively in Taylor's AOL Dream Group Therapy.

Suler (1997) developed a convention of "listening". When one person was clearly caught mid-sentence or mid-thought by the limitations of the program, others "need to sit back in a 'listener' mode. Some users will even type "listening to Joe" to indicate this posture to others (p. 5)". He describes "staccato speak" as a joking around or playful exchange, a group "free for all (p. 6)." His illustrations are reminiscent of the "Fireside 5" or "Monty Python" comedy routines (p. 6). Suler includes acronyms (e.g., brb for be right back) under this category but this researcher tends to see acronyms as more similar to emoticons, emotion bracketing and other text talk enhancement. The occurrence of "staccato speak" (minus acronyms) in psychotherapy could signal anxiety or avoidance of painful emotions.



Barak et al (1999) conducted one of the only empirical studies reported. He and his team chose synchronic chat groups for their research because e-mail, the most common form of Internet therapy,

“lacks a key feature of human interpersonal communication characterized by spontaneity, authenticity, immediacy and directness. This feature is directly related to the commonly accepted and generally appreciated therapeutic factor of here and now. Numerous schools of psychotherapy argued that this immediacy factor may be responsible to a great degree for dramatic therapeutic developments. In addition, defense mechanisms or cognitive distortions (depending on the school of therapy) are less likely to take place in a “here and now” therapeutic situation. (p. 1)”

In this study of brief Internet Chat room group therapy, Barak. recruited 15 students from several Israeli universities and community colleges. Six participants (three men, three women) were assigned to the Internet condition and nine students (three men and six women) were assigned to a traditional face-to-face group therapy. Both groups were led by experienced, female therapists and were brief, dynamically oriented. One therapist conducted the Internet group while the other conducted the face-to-face group therapy. The Internet condition was conducted in a JavaScript, password protected chat room for seven, ninety-minute sessions. The face-to-face group met on the campus of the University of Haifa. The dependent measures were Measure of Therapy Impact: Self-Esteem, Social Relationship, and Well-being. Each scale was a 25 item Likert-like scale but Barak does not cite the source of these measures Moose (1981) developed the group process measure, a Likert-like evaluation questionnaire designed to elicit opinions about the Internet group therapy experience. Because of the small number of participants in

this study, the data were evaluated qualitatively by analyzing chat room transcripts in addition to reviewing the results of the dependent measures.

Results indicated that participants exhibited positive support, personal disclosures, interpersonal sensitivity and group cohesiveness. No comparison with the face-to-face group was reported. Recommendations for further research include a study of preparation for therapist for Internet therapy, and rules by which such groups should operate (Barak & Wander-Schwartz, 1999).

#### Multi-modal

Colon (1994), a prominent social worker, conducted one of the first studies of Internet psychotherapy. She conducted a three-month study with eight participants using email, chat and bulletin board. Participants were recruited and screened from ECHO subscribers. Participants were screened, refrained from in person contact with one another or Colon, posted/participated actively at least three times a week and participated for three months. Colon's training was psychodynamic and so were her Internet groups. Her primary concern about the experiment Internet groups was the absence of non-verbal cues. (p. 9). She concluded "In Internet therapy, and perhaps in the psychoanalytic session, language *is* action. Nothing "happens" Internet, or for all intents and purposes, in therapy. There is no way to quantify what happens in an Internet group. And yet lives can change."

Phillips (1996) qualitatively compared four groups within which she participated, an Internet service Adult Children Of Alcoholics (ACOA) chat group, an Internet service ACOA email list, an Internet ACOA email list and an ACOA chat group she created on the Internet service. None of these groups appear to be formal groups with regular attendance, ground rules and on going interaction as defined by Yalom (1995) whom

Phillips cites extensively. She reported that each group was roughly organized along the 12-step philosophy. Her discussion indicated that she was a participant in the first three groups rather than a researcher or group leader. She briefly touches on private conversations (IM), cross talk, advice giving, and anonymity as assets of Internet groups but there is little research in group therapy to support these as constructive, which she acknowledged, but saw as a positive difference between in person and on line groups.

Suler (2000) compiled a list of ten issues to consider in developing understanding in Internet groups and communities. These are general considerations about the uniqueness of the Internet rather than group process constructs.

#### Unidirectional Information Only

Many Internet using therapists are cautiously waiting for legal issues to be resolved and are providing only information, advice, or recommendations, but not psychotherapy. Grohol's forced and constrained definition of e-therapy demonstrates this caution (Grohol 1999b, Grohol 2001), while he is, paradoxically, one of the most outspoken researchers defending the legality of Internet work (Grohol 1999a).

Unidirectional information is generally health related articles, electronic journals, and patient information sheets (e.g., WebMD.com, MayoHealth.org).

#### Guidelines for Ethical Practice of Internet Counseling

The need for ethical guidelines to direct the development of Internet psychotherapy services was recognized by all major mental health organizations almost as soon as the Internet became commercial. The Health on the Net Foundation published HON Code of Conduct for Medical and Health Websites (HON 1995). Two years later, in 1997, the National Board of Certified Counselors published Standards for Ethical Internet Counseling; and the American Psychological Association published Services by

Telephone, Teleconferencing, and Internet: A statement by the ethics committee of the American Psychological Association). In 1998 the American Medical Informatics Association published Guidelines for the Clinical Use of Electronic Mail with Patients. The American Counseling Association published Ethical Standards for Internet Counseling in 1999. The International Society for Mental Health Internet and the Internet Health Coalition each published their standards in 2000. In 2001, the American Psychiatric Association published American Psychiatric Association principles for medical ethics with annotation especially applicable to psychiatry.

In a pilot study, Mitchell and Murphy (1998) examined the email therapeutic relationship with one client who had engaged in over 100 transactions with the therapists. In 1995, the researchers had set up a pilot counseling site on the local computer bulletin board service. They limited access to counseling services to two thousand members. The services offered were the Virtually Solve It worksheet (VSI) an Internet form design to help the potential client explore and externalize the problem. They introduced therapy-e-mail and Ask PATtYQ, which stood for Professional Answer To Your Question. In 1998 they interviewed the one client chosen for qualitative response to issues being debated by the National Board of Certified Counselors committee on WebCounseling ethics - security issues, physical absence, emergency situations, technological failure, therapeutic relationship/efficacy and access.

#### Credential Validating Referral Sites

Reliability, credibility and freedom have been the core values of Internet developers almost since its inception and certainly, since, it became available to the public. Switzerland is home to two of the primary Internet regulatory bodies, the WWW Consortium and Health On the Net Foundation <http://www.hon.ch/> -- @HON. The W3

Consortium sets voluntary but fairly universal technical standards used in HTML, JavaScript and other development and implementation design tools. @HON, which organized in 1997, sets standards for health and health related web activity. @HON, has a strict, enforced code of conduct in seventeen languages, requiring trained and qualified professionals, support not replacement of traditional care, confidentiality, appropriate credit to source materials, justifiability of products or services, transparent authorship, transparent sponsorship, and honesty in advertising and editorial policy. @HON enforces compliance in several innovative ways. The @HON logo, which is displayed on certified web sites, is “active” or “live”. When a web site visitor mouses-over the @HON logo it will link to the @HONcode web site. Non-certified web site designers can copy the logo to their web site but cannot copy the active link. Web users are aggressively encouraged to report any non-active links for @HON team action. The @HON team uses the active link to perform random web site checks. To earn the right to use the @HON active link logo, the web site designer must complete a detailed application and submit to a @HON team examination of the Web site. The applicant must make changes required to come into compliance with HONcode (HON 1995). @HON is recommended by such prestigious American medical organizations as the Mayo Clinic “When you visit a health Web site, look for a logo from the Health on the Net (HON) Foundations. Sites that display this logo agree to abide by the HON Code of conduct. Some sites may choose instead to publish a statement explicitly affirming that they are in compliance with the HON Code of Conduct (Edwards, 2000).”

The International Society for Mental Health Internet <http://ismho.org/>, and WebPsych Partnership sponsored by ISMHO <http://www.ismho.org/webpsych/> are the

major American based mental health Internet research, development and self regulating organization. Membership and use of the ISMHO logo on a web site is open to any one, professional, consumer or other, who is interested in the development of mental health resources on the Internet, for a modest annual membership fee. There is no site evaluation or monitoring such as @HON uses. The goals of these organizations, however, are not necessarily congruent with those of the professional organizations. For example, the goal of the WebPsych Partnership is “to ensure a high quality of Members’ sites and reduce unnecessary competition and harmful in-fighting.” In fairness, it does seem to be focused on promotion of web sites and accuracy of web sites rather than interaction with clients or other persons seeking mental health information.

Ainesworth’s web site, <http://www.metanoia.org>, was organized in 1995 and remains one of the primary resources for information about mental health resources, counselor referral and information. She is a consumer report organization. She adamantly does not hire therapist or market services. Her listings are free, but the e-therapist must meet criteria that includes — having a web site which she evaluated with @HON standards, communicating personally with individuals, personalizing help to these individuals, and communicating with individuals through the Internet. She will not list any “sites where services are not offered by a credentialed professional psychotherapist.”

There is a profusion of sites and listings that do not require professional criteria for inclusion, but do have some criteria. Mental Health Resource with Leonard Holmes Ph.D. purports to be “your guide to over 700 sites”; however, these sites include related professions such as law and unrelated topics such as aliens. The criteria to list with this

site indicated that a web site “should not be used to advocate or promote the following: any illegal activity, activities that support or espouse non consensual and/or extreme violence or sexual aggressiveness toward another individual or group for any reason, activities that support or espouse hatred towards another individual or groups based on any criteria and activities and input from individual that violate our inclusive standards <http://mentalhealth.about.com> .” While these are laudable criteria, they fall short of mental health professional practice criteria.

Clinician’s Yellow Pages <http://mentalhelp.net/mhn/yellowpages/> ; Who’s Who in Mental Health on the Web <http://idealist.com/wwmhw/>; Find-a-Therapist; and 1-800-Therapist; list web site for an annual fee, without evaluation or monitoring, similar to a listing in the Yellow Pages of a telephone directory.

Basically, a psychotherapist practicing on the Internet must establish all the same security, authenticity, and grievance procedures as the psychotherapist seeing clients in a physical office. A physical office has a pleasant, soothing decor, locks on the doors, security system, secure location and procedures for charts, requests for notes and so forth. In physical office, a therapist must display, at minimum, the occupational license and the professional license to demonstrate authenticity and grievance resources. The virtual office needs an effective web site that is uncluttered, appealing, and easy to navigate. There must be firewall(s) protecting the therapist’s computer system, SSL across the network and easy instructions for client firewalls (locks on the doors). Authority to practice is demonstrated by posting live logos (i.e. licenses) for security (e.g., Verisign) and credentials (e.g., @HON). Live logos are linked to the company and the client can instantly verify the therapist’s legitimacy to the extent of each authoritative body’s

responsibilities. No one denies that these technologies are cumbersome and may well cause therapists to think twice about practicing on the Internet or incline some therapists to practice without adequate safety precautions.

### Advantages of Internet Counseling

The perceived advantages of Internet Counseling are it's immediacy, availability, anonymity, and economics (Brown & Walz 2000, Fink 1999, Grohol 1999b, Grohol 2001, King & Moreggi 1998, Patterson 2000, Stubbs 2000). Internet access is immediate, any day of the week, any time of day, any where in the world. One does not have to wait for business hours or for an appointment. The Internet users in search of information, companionship, and advice to get through a sleepless night, pain, or spasms can readily find help in a chat room, bulletin board or informative web site. The Internet is available in many remote geographic areas where users do not have access to therapists. It is available to situationally remote users include home bound care-givers, the elderly, persons with disabilities, and those who would be at employment or social risk from seeking counseling. The Internet can be anonymous. Personal information (age, gender, ethnicity, physical condition) can be disguised. Web counseling is considerably less expensive than traditional face-to-face counseling. The overhead of maintaining a web counseling site is much less than that of renting office space, maintaining a staff, occupational license, furniture and equipment, the myriad of taxes, and other "cost of doing business" in the traditional setting. Owners of the PsychOptions site [http://www.psychoptions.com/raters\\_&\\_types\\_of\\_services.htm](http://www.psychoptions.com/raters_&_types_of_services.htm) , for example, lists the following charges: One question/one problem \$25; One e-consultation/first on-going session \$50; On-going session \$35; Telephone session \$50 for 50 minutes. The one question, e-consultation and on going sessions are all conducted by email. The



PsychOptions site offers a sliding scale “If you have extenuating circumstances and/or are over 65+ and/or on a fixed income then you may contact PsychOptions to request an adjustment and explain the reason why.”

#### Disadvantages of Internet Counseling

Internet counseling is a double-edged sword. The disadvantages of Internet counseling can be the same as the advantages -- immediacy, reliability and validity of information, security (e.g., privacy and confidentiality), anonymity, abandonment, physical absence, ethics, legality, and security (Grohol 1996, Storm & Moreggi 1998, Oravec 2000). While a potential client may be assured of a response within 48 hours while a non-crises office client may have to wait a week or two for a first appointment, the quality of that first contact may be no more valuable than the first phone calls to a physical office and responses appropriately provided by trained office staff. The credentials of the Internet counselor may be as valid as those of the office counselor; however, it is generally more difficult to verify those credentials as demonstrated above in the extensive discussion of web security. In a traditional office the client can examine see the professional license and the business license, both of which are required by law (at least in Florida) to be prominently displayed. The local Better Business Bureau and Chamber of Commerce can both be contacted to check the counselor's business history and can offer recourse if problems arise.

As discussed above the web is developing comparable resources in @HON and Metaniaoa.com, however they are not well known. Furthermore, in a physical site, the client has recourse if credit card charges, personal checks and cash payments are mishandled. Again the Internet offers security but many sites promise security (e.g., affordablewellness.com) when in fact they are not secure. Buyer beware is never more

true than in the Internet environment. PayPal.com acquired by Amazon.com in July 2002 offers some of the same financial recourse as services continue to evolve in the credit card industry as e-commerce grows. Unless the URL begins with https (hypertext transfer protocol secured), the site is not secure. Unless there is a small padlock icon on the status bar of Internet Explorer or Netscape, the site is not secure. Again, many consumers, especially in a time of stress or crises precipitating contact with a counselor, may not be aware of these Internet conventions. To avoid the expense of a secured site, many small merchants ask that credit card numbers be emailed to the site. Email can be secure but again, if it is, there is evidence of that security that clients are unlikely to know or consider in a time of distress. Does Internet counseling provide privacy and confidentiality both in personal information and financial information? It can, but many sites do not.

There is often legitimate concern in physical counseling rooms about thin walls, crowded waiting rooms, and non-counseling staff access to chart notes. There are, however, analogous problems in a cyber counseling room - the client's own family or co workers may have access to the screen as the client "talks" with the counselor or to the records in the computer. A spouse seeking a contested divorce, a vindictive co-worker and other persons with agendas harmful to the client may be able to print off logs of the sessions, emails, or bulletin board postings. Clients, computer end users, may or may not be aware of what is recorded in the computer program itself. A client can conscientiously protect his or her email correspondences, and yet never know that the chat session is automatically being saved by the computer software. The client's own associates may have more access to the very information that the client needs to have secure from others.

Another disadvantage is face validity on the Internet. A well-designed site may have powerful face validity that speaks volumes for the competence of the web designer but say nothing about the credentials and skills of the counselor. With a population accustomed to visual pleasure from screens - television, movie, electronic games, and computer monitors, the design may allow totally unqualified, perhaps even harmful "counselors" to garner large "practices". What you see, may not be what you get.

Anonymity, abandonment, and physical absence are closely related. The client and the therapist for that matter can disguise his or her identity on the Internet. This reality needs to be built into Internet counseling theory as the modality evolves beyond applying traditional modes to the new media. The client could also disguise his or her identity in person although it is more difficult if payment involves insurance policies or credit cards. Abandonment is a serious risk on the Internet, while it is less likely to occur in a physical practice setting. Traditional clients may feel abandoned when their treatment is completed, when they are referred to another mental health care provider when these issues required different skills or training, or, in a clinic setting where the counselor turn over may be high; however physical sites rarely "just disappear" the way web-sites do. Some argue that no interpersonal bond in the cyberspace can replace actual physical presences (Plant, 1996).

#### Cognitive Behavioral Counseling Models

Cybercounseling is not limited to one or a few theories or therapeutic models of counseling. Researchers have studied family (Oravec 2000), self help (Storm & Moreggi 1998), group (Barak & Wander-Schwartz 1999, Colon 1994, Suler 2000), and brief cognitive (Edelstein 1996, Palmer & Ellis 1995, Ellis 1996), therapies conducted in cyberspace. This study, however, will apply the brief cognitive behavior therapy model

because it is best suited to the participant population, personal growth issue-focus and alliance development. As such it provides a model appropriate for 3-session, personal growth focused study conditions.

### Cognitive Behavior Therapy

Cognitive Behavior therapy grew out of the work of social learning theorists including Lewin, Bandura and Lazarus. Prominent researchers in this important area of theory and therapy include Ellis, Meichenbaum, Beck, Burns, Marks, and Rush. Meichenbaum (p. 179-198) describes the process of therapy as involving three mental constructs he calls cognitive events, cognitive processes, and cognitive structures. His theory links these cognitive constructs to emotion, behavior and logical and natural consequences of those behaviors. *Cognitive events* are conscious, identifiable and readily retrieved thoughts, images and feelings. They include appraisals, expectations, attributions, self statements, automatic thought and internal dialogue. The person experiences them as spontaneous, and rarely questions them. These events occur when an individual is trouble shooting a problem, uncertain about an action or choice, and when a routine behavior is blocked requiring an alternative or creative solution. *Cognitive processes* are the mental processes by which we acquire information, store it in short term and long term memory, appraise information, filter it, and recall it. Meichenbaum identifies three cognitive processes that lead to emotional distress - confirmatory bias, mental heuristics and metacognitions. Confirmatory bias is pre conceived notions or ideas that function as fact. Mental heuristics is the habit of selecting experiences or information that confirm pre-conceived biases. *Meta cognition* is the ability, knowledge or skills to be aware of and control ones own cognitive processes. The process and goal of cognitive behavior therapy is to educate the client in recognizing his or her cognitive

events, cognitive processes and meta cognition. Cognitive templates or schemas are identified and the client is enabled to change those templates that no longer function in his or her best interest. Meichenbaum encourages the client to be his or her own “folk” scientist and assigns “experiments” to develop needed skills. He encourages therapists to use specific examples to identify faulty logic “We have found that people often make certain kinds of errors in the way they look at situations and that these errors in thinking may contribute to arriving at premature or incorrect conclusions. It’s natural to readily come to such conclusions without even noticing them (p. 193).” Logical errors include all or nothing thinking, seeing possibilities as certainties, dichotomous thinking, personalization and self blame for negative events, and over generalization. Because this theory and therapy relies on homework and experimentation by the client to reach his or her own conclusion, that affect change, it is adaptive to an Internet Counseling environment.

Gabriel & Holden (lecture reported in Laszlo 1999) developed an Internet protocol for cognitive behavioral therapy, that looked at theme patterns in text based sessions. They sought patterns of over generalization as indicated by the use of polar adjective, excessive self attribution of responsibility, minimizing or maximizing significant issues, and focusing on negatives (p. 296-297). There does not appear to be further information on their theory or research but it is intuitively practical.

Ellis developed Rational Emotive Therapy (REBT) in 1955 and changed the name of this theory and method to Rational Emotive Behavior Therapy in 1993 to include the Behavioral component of change, which had always been present in his theory (Ellis 1998). He posited emotional and behavioral problems have their source in faulty

thinking or irrational beliefs. His *ABC* model has grown alphabetically over time but still focuses on an *Activating* event, some event at work, home, or interpersonally that triggers the emotional crises or *Consequences*. The client experiences the *Consequences* with or without being aware to the triggering event and generally without being aware to the irrational, rigid *Belief* that connects a triggering event to the emotional or behavioral consequence. In REBT, the irrational *Belief* is *Disputed* using cognitive skills introduced by the therapist but practiced in homework by the client. The outcome is *Effective* and *Efficient* responses to would be *Activating* events. Ellis identified eleven irrational beliefs that cause the gamut of emotional problems.

Some of the websites established by founding CBT therapists are located at :

Aaron Beck, M.D. -- <http://www.beckinstitute.org> ; David Burns, Ph.D. - <http://feelinggood.com> ; Albert Ellis, M.D. - [Http://www.rebt.org](http://www.rebt.org) ; Isaac Marks, M.D., - <http://www.thisiswiltshire.co.uk/> ; Donald Meichenbaum Ph.D. - <http://www.arts.uwaterloo.ca> ; and A. John Rush, M.D. -- <http://www3.utsouthwestern.edu/psychiatry/facbios/rush.htm/>

#### Brief Cognitive Behavior Therapy

Ellis (1996), Beck (1979) Burns and Meichenbaum (2000) have each researched and developed brief cognitive behavior therapy protocol some of which are as brief as one session maximum benefit. In a World Counseling Network forum Ellis (1998) describes REBT as “designed originally because psychoanalysis and most other forms of therapy were very long winded. So I tried to devise a system that would understand the core beliefs, the core irrational beliefs of the clients very quickly and help them to get to work to dispute them and debate them in a short period of time. So in a sense REBT was on to the few therapies designed to be brief (p.2).” In reply to a question about efficacy

of short term therapy, Ellis mentioned that “at least 1000 empirical studies. . . tend to show that short term therapy at least when it is done with CT or REBT definitely is as effective or more effective than other kinds of therapy and more effective than the therapy that is given to control groups (p. 4).” He further cautioned White, de Shazer, Watzlawick and other brief therapy authors that they “had better not use the generic term ‘brief therapy’ to imply that they are the only form of brief therapy.

Ellis (Palmer & Ellis 1995) was trained in psychoanalytical therapy but realized that it takes “a fairly long time to get people to free-associate, analyze their dream and go over and over their childhood and later historical material.” He describes his early work as psychoanalytically oriented as opposed to classic psychoanalysis. “I found out, to my surprise ...that it was better, got better result than classical analysis... you quite quickly get their basic history (p. 68-69).” He continued “REBT is intrinsically more efficient and briefer. Often during the very first session I can show people the ABCs of distress. . . . So REBT is sometimes successfully done in a few sessions (p. 69).”

In his book on brief therapy, Ellis (1996) affirmed that REBT can be accomplished with self help materials including books and cassettes that teach the REBT principles Edelstein (1996) advocated three minute REBT sessions applied twice a day focused on Ellis’ construct of “musty thinking”. He demonstrated that one session can be sufficient to teach the principles of Rational Emotive Behavioral Therapy and involve the client in three-minute techniques. In the forward to Edelstein’s book, Ellis, founder of REBT, says “Of course it takes significantly longer than three minutes to dislodge the many dysfunctional aspects of a troubled personality. But the clear and simple exercises advocated by Dr. Edelstein, exercises, which are totally consistent with my principles of

Rational Emotive Behavior Therapy, can be practiced in three minute segments, to be repeated several times a day.”

Wood (2001) describes the typical CBT length of treatment as brief. “One of the major features of CBT is the relatively short time frame required for change to begin. Some “brief interventions” were developed using the CBT approach for a one-time, several minute session (suitable for application by generalist health workers such as nurses and general practitioners). She emphasized that even when these extremely brief sessions are not used, CBT rarely requires more than 6-12 months, which would include scheduled follow-ups for gain maintenance and stabilization.

Brief therapy mandates that a therapeutic relationship develop quickly, therefore numerous researchers emphasize the need to carefully select high functioning clients who have a high level of interpersonal functioning. Seriously-ill clients should be referred for long-term therapy where development of the interpersonal relationship can be the focus and goal of therapy. (Safran & Muran 1998) These authors recommended that early priorities in brief therapy should be to develop the therapeutic bond with warmth, respect and genuine interest, reminiscent of Rogers. They offered that the therapeutic rationale, the goals and tasks needed to accomplish that goal, should be laid out in the first session. They summarize their recommendations metaphorically as “part Marcus Welby and part Sherlock Holmes.”

#### Using Brief Therapy with Undergraduates

It seems reasonable to assume that most college students are high functioning by virtue of meeting admission criteria and remaining in an environment that requires self-care and executive functioning. Those who are not high functioning will quickly come to the attention of the resident advisors, concerned friends and faculty, or the crisis center



and be referred for appropriate care or encouraged to return home for care. This is not to suggest that college students do not have serious mental health issues and concerns but rather that they are most likely to have the personal talents and resources to maintain functioning through personal crises and while seeking counseling services available. Wilson (1978) addressing common developmental problems of career direction, sexuality, belief clarification and separation from parents, went so far as to suggest classroom and resident hall intervention would provide cognitive interventions by providing problem solving development. Archer and Cooper (1998) , Pinkerton and Rockwell (1994) and Steenbarger (1992) have applied the tenets of brief therapy to the target population of this study. Although each of these researchers found that there is resistant on the part of colleagues to endorse brief therapy, their research and the research of others found brief therapy "to be both effective and efficient in campus counseling and mental health counseling.

Luckey (1996) and Christmas (2000) addressed the use of Internet communication modalities with college students. Indiana University of Pennsylvania, University Health Services (Luckey 1996) used the Internet for communication and data base processing. Because this work was written early in the public access to the Internet, its application appears to be limited to communicating with and retrieving data from colleagues rather than direct student services. However, four years later, Duke University (Christmas 2000) was using unsecured E-mail (password protection only) with the student body population and had established guidelines for interaction with students by email. These guidelines specify the exclusion of "sensitive" information that North Carolina state law requires a health care provider to present to a client in person (e.g., positive HIV lab

results, pap smear results, worker's compensation information, and some prescriptions).

It does not appear that Duke University student health services were providing counseling services via the Internet; however the guidelines do not seem to exclude such use as long as topics precluded by state law from remote access were not discussed. It is significant that Duke University was not using an encrypted site.

### Undergraduate Personal Growth Concerns

University administrators, entrusted with the education, safety and well-being of hundreds of thousands of young adults, many of whom are away from home for the first time, have needed to know the kinds of stressors, issues, problems and concerns typically manifested on a college campus. Murphy and Archer (1996) identified thirteen academic stressors and fifteen personal stressors in a survey of 639 students attending the same university as participants in this study. Academic stressors confirmed by a significant number of respondents included tests and finals, grades and competition, professors and class environment, studying, finances, papers and essays, speaking in class, and others. Personal stressors confirmed at a significant level were parental conflicts and expectations, finances, interpersonal conflicts, judgment and acceptance by peers, personal achievement and goal setting, approaching and meeting other students, general adjustments to change, personal appearance, current job, and other. The "other" category allowed students to include stressors not mentioned in the survey. The most frequent "other" was not getting enough sleep, followed by finding time to get everything done. Other statistically significant stressors were family member illness or injury, personal health, and pledging. These are the types of issues thought to be appropriate for personal growth sessions conducted during this study. The study illustrated that while the rank order of problems changed from 1985 to 1993 changed, the categories remained the

same. The same is assumed to be true between 1993 and 2002; however it recognized that the wide spread access to the Internet, the university requirement of personal student ownership or ready access to computers, the use of Web based and distant learning and the events of 9/11/01 may have generated new categories of concern not relevant in 1985 or 1993 although no such new categories were observed in the present study.

### Individual Information Processing Differences

Many factors have been demonstrated to influence how individual process information such as therapy input and tasks results. Some of these include environmental and cultural variables such a race, gender and ethnicity, brain lateralization with emphasis on processing information verbally or with images, and personality traits including introversion and extraversion.

### Demographic Factors

The major premise of the huge national investment in Telehealth/Telemedicine is that technology provides a method to reach under served populations -- women, undereducated citizens, rural citizens, Native Americans, citizens with disabilities, and citizens of color (HCFA 1996, HCFA 1999). The concern of researchers (Reid 1994, Powell 1998) is that the price of technology, and the education and experience required to uses these resources may effectively exclude the very populations it is thought to most be able to benefit. Powell (1998) found that the majority of Internet therapy users were male.

### Learning Style Theory

Learning style, brain lateralization, and information processing research and theory have contributed a substantial body of information indicating that people encode, process and retrieve information in distinctly different manners. Two style systems are of

interest to the present research, academic oriented learning styles and temperament based learning styles. Academic learning style theory addresses specific skills and tasks generally incorporated into formal pedagogy. Temperament based learning styles affect how the individual learns formally or informally by his or her inborn nature and traits.

### Academic Learning Styles

Of the researched styles, verbal, visual, kinesthetic, group, individual, oral expressive, and written expressive (Babich, Burdine, Albright & Randol 1976), the most consistently identifiable and validated styles have been visual and verbal (Lazarus 1964, Richardson 1969, Richardson 1977, Delaney 1978, Dyckman & Cowan 1978, Akins, Hollandsworth, & O'Connell 1982, Akins, Hollandsworth, & Alcorn 1983, Pavio & Harshman 1983, MacInnis & Price 1987).

Richardson (1969) cites a late 19<sup>th</sup> century researcher, Lay, who illustrated his concept of the misunderstanding among people as being a result of learned or innate preference for verbal processing or visual processing with the historical animosity between Greek philosophers Socrates who “heard the voice of his daemon” and Protagoras who thinking and debating relied upon visual/kinesthetic processes. Richardson quotes Lay as saying “if one is auditory-linguistic he should never enter into an argument with a motor-linguistic person, as on all topics except the most concrete facts, either will inevitable fail, completely, to understand the other (p. 83).” The preference many mathematics students have for either word problems or equations is a relatively common example of the encoding, processing and retrieval impact of verbal processing or visual/symbolic processing, respectively. Lazarus (1964) deemed visual processing to be a crucial factor in systemic desensitization therapy. Now, nearly 40 years later, the question must be asked if the ability to visualize a virtual counseling

environment is an individual difference in the ability to develop a therapeutic working alliance and produce a satisfactory therapeutic outcome. As potential clients are evaluated for cyber counseling, should their preference for verbal processing or visual processing be considered?

### Visual Learners

MacInnis and Price (1987) summarized the role of visualizing in marketing as “a processing mode in which multisensory information is represented in a gestalt form in working memory.” The visualizers were found to use daydreams and fantasy in addition to graphically and pictorial representations in problem solving. Babich (1976) operationalizes the visualizing construct as the preference or ability to learn from seeing words or numbers and remembering spoken information by writing it down. Richardson (1983) found that the visualizer’s thinking processes consisted of pictorial or visual images. The visualizer attended to the spatial layout, physical features, and sensory input of information to be encoded.

### Verbal or Auditory Learners

Babich, Burdine, Albright & Randol (1976) operationalized the verbalizing construct as a preference for hearing words or numbers spoken and noted the common practice of verbalizers to vocalize or move the lips or throat while reading written materials. Richardson (1983) found that verbalizers’ thinking processes consisted of spoken words or self-verbalizations, that is, linguistic encoding, labeling or naming. He likened it to an experience of inner speech.

### Temperament Learning Styles

A second widely used learning style indicator has been developed by educators using the MBTI temperaments (rather than types). The learning styles are SensingPerceiving (SP), SensingJudging (SJ), iNtuitingThinking (NT) and iNtuitingFeeling (NF). Dean (1997) noted that these four personality were recognized as early as 450 B.C.E. These four temperaments are found in the sixteen types associated with the . Gallagher (2002) describes people with the SJ temperament as guardians of tradition or traditionalists, learning from the past. People who prefer to use the SP functions are artisans and experiencers who learn best from their own work and experience. People who draw primarily upon the NT functions learn best conceptually looking for rationale, explanation, theories and hypotheses. People who depend most strongly on the NF functions are seen as idealists and learn inductively.

#### Sensing Perceiving

Dean (Dean, 1997) proposed that people using the SP function combination or temperament are similar to those C.I.T.E. describes a kinetic tactile, preferring hands on and active learning situations, which offer the opportunity to construct, operate and manipulate objects.

#### Sensing Judging

People using the SJ learn best when their classroom, counseling environment, or other learning situation provides clear expectations and a “right way” to do things. Clear directions, specific extra-therapy assignments and an overtly structured session are valuable assets to learning for those using the SJ functions

### Intuitive Thinking

People using the NT style learning well from long-term independent projects, experimentation, inventions, and complex problem solving. This style is somewhat similar to the visualizer and group independent style.

### Intuitive Feeling

NF users need cooperative personal relationships and learn best in a friendly atmosphere. They do not do well in rote, non-democratic environments. They prefer ideal relationships and excellent interpersonal communication skills somewhat similar to verbal or auditory learners.

### Learning Style Conceptualization Comparison

It should be noted that although there are some similarities between the C.I.T.E. learning styles and the MBTI learning styles, they are not redundant and each offer a different perspective on learning. Designed for the classroom, the C.I.T.E. learning style taps actually educational activities preferences in its items and classifications, while the , based on the broad Jungian theory of personality and temperament, is more generalized and perhaps more applicable to life long learning in an educational format and well as in life in general learning. Therefore, both measures were used as independent measures in this study.

### Measuring Information Processing

Richardson (1977) developed the Verbalizer-Visualizer Questionnaire “to access the extent to which one’s thinking processes consists of words or self verbalization versus pictorial or visual images.” It consists of 15 forced choice items adapted from Paivio’s

86-item Ways of Thinking Questionnaire. The questionnaire was normed using junior high school students.

While Richardson examined information processing in social psychology, education psychologists Babich, Burdine, Albright and Randol (1976), developed a learning style inventory, which is widely used today. They targeted three areas of concern - information processing, work conditions and expressiveness preference. It is the information processing - visualization, verbalization that parallels the social psychology work. Items were drawn from the same source material as the Visualizer Verbalize Questionnaire, has more extant reliability and validity data, is published and readily available, and has been used extensively in education, adult education, career counseling and vocational rehabilitation. The Center for Innovative Teaching Experience Learning Style Inventory (C.I.T.E.) is used by the Veterans Administration and public school districts across the country to identify learning styles and to guide instructors, counselors and teachers in designing learning experiences to maximize the students' use of their preferred learning style. The West Virginia Adult Basic Education program uses the CITE as its primary assessment instrument to guide recommendations for tutorials, adult learning experiences, and vocational training.

Myers and Briggs (1962) developed an extensively studied, widely used assessment tool, the Myers Briggs Type Indicator (MBTI) to measure the individual's trait preferences consistent with Jung's theory. There are four independent dimensions, introversion/extroversion; sensing/intuiting; thinking/feeling and judging/perceiving. Interpretation of the "type" involves hypotheses about the interactions of these dimensions and involves understanding of dominant functions, auxiliary, inferior



functions, and so forth. The result of an MBTI is one of sixteen types that purport to describe a person's inherent functioning and are used to help people understand why others respond differently in the same situation. Keirsey and others have focused on temperament grouping and developed their own variations on the MBTI; however, the MBTI was used for this study because it provided both the learning style data and personality trait data discussed below.

### Personality Attitudes

Except for those clinicians who practice radical behavioralism, individual traits play a prominent role in the planning, conduct, process and outcome of psychotherapy. Jung (1923) was once of the earliest psychiatrists to postulate personality types. He identified polar attitudes that he called introversion and extraversion. In the MBTI user's manual, Myers (1962, p. 9) describes extraversion as a trait or attitude of people who "like to focus on the outer world of people and activity. They direct their energy and attention outward and receive energy from interacting with people and from taking action." She describes introversion as an attitude of people who "like to focus on their own inner world of ideas and experiences. They direct their energy and attention inward and receive energy from reflecting on their thoughts, memories, and feelings." Eysenck (1970) suggested that personality is biologically determined and is arranged in a hierarchy consisting of types, traits, habitual responses, and specific responses. Eysenck built upon Jung's theory with empirical research, describing a structure of personality along three dimensions, one of which was introversion-extroversion. Brinegar (1992), researching the predictive value of the MBTI in counseling outcome found that "extraversion-introversion dimension surfaced as the only single dimension score to be significantly correlated with counseling outcome." Myers, as early as 1962, suggested

implications for counseling based on type and counseling goal - vocational and career, education and learning, organizational team building - and provides guidelines for using introversion/extraversion (as well as other scales) appropriately in each setting.

#### Introversion

The trait of introversion is generally associated with a preference for communicating in writing, working out ideas by reflecting on them, being private and self contained, and for taking the initiative when a situation or issue is very important to the person (Myers 1962).

#### Extraversion

The trait of extraversion is seen in people who are attuned to their surroundings, communicate verbally, problem solving by talking through issues, and learn by doing or discussing (Myers 1962).

#### Measuring Personality Attitudes

While Jung, Briggs, Myers, and McCaully all thought and taught that the dimensions are dichotomous, several researchers (Mendelson 1965, Girelli & Stake, 1993) examined the scales as continua and suggested that the forced choice format of the forces the bipolarity artifact, underestimating the true continuum of the dimensions. The current protocol for scoring the MBTI has keys for calculating the degree of introversion/extraversion for example rather than regarding them as dichotomous categories. For the purpose of this study, the scales were treated as discrete traits.

The dimension relevant to this study is Introversion/Extroversion. Livingood (1995) found that "the number of introverts on these (Internet mail lists by MBTI type) is five times greater than the number of extroverts. However, in the United States at large,

introverts are a minority group comprising only 25-30% of the total population. (p. 8).” While intriguing, this may be skewed by the obvious fact that the mailing lists are presumably drawing from a world population rather than a US population. Livingood himself writes from Australia. This perception may also reflect the observation that the people who first had access to the Internet and continue to have predominate access to the Internet are engineers and scientists who make up that 25%-30% of American introverts (Myers 1982). The use of the introversion/extroversion scale in this study is significant because the study population is United States citizens or international students choosing to study in the United States. The participants were recruited from the College of Education rather than engineering or science.

#### Counseling Process and Outcome

During the first half of the 20<sup>th</sup> century, researchers primarily focused on understanding the psychological processes that affected the well being of the population. This research generated the great theories of personality and the applied therapies have helped people enjoy a better quality of life for three generations. In the second half of the century, researchers began to examine how the therapies produced the results that were anecdotally abundant. They examined what factors, conditions and environments that increased or decreased the efficacy of therapies. Financial accountability in government health care service has driven research in outcome efficacy and consumer satisfaction for the past two decades. In the mental health field, this research has taken two primary directions, efficacy of the counseling process, the helping relationship, (Gaston 1991, Greenson 1965, Hartley & Strupp 1983, Alexander & Luborsky 1986, Klee, Abeles, & Muller 1990, Kobotovic & Tracey 1990, Horvath & Symonds 1991, Horvath, Gaston & Luborsky 1993, Horvath & Luborsky 1993) and efficacy of the over all experience,

consumer satisfaction (Becker et al. 2000, Cialo 1982, Eisen, Leff, & Schaefer 1999, McCullough 1993, Preston 2000, Treadwell, Soetikno, & Lenert 2000).

### Working Alliance

For several decades, researchers have attempted to isolate the therapeutic method or technique that was most effective. This research had limited results when the broad concept — the interpersonal milieu of therapy, first introduced by Freud as transference — was examined. Clarkson distills from the literature and her diverse theory training, five relationships between therapist and client, which strongly inform this study. Although not all these relationships may exist in any given therapeutic relationship, and may not be recognized by all theoretically orientations, each is potentially available within computer-mediated therapy as in the face-to-face work, however it was the first, the working alliance, with which this study is primary concerned. Identified therapeutic relationships include

- “*The working alliance* as the part of client-psychotherapist relationship that enables the client and therapist to work together even when the patient or client experiences strong desires to the contrary.
- *The transference/countertransference* relationship as the experience of unconscious wishes and fears transferred on to or into the therapeutic partnership.
- *The reparative/developmentally-needed* relationship as intentional provision by the psychotherapist of a corrective, reparative, or replenishing relationship or action where the original experience was deficient, abusive or overprotective.
- *The person to person* relationship as the real relationship or core relationship as opposed to object relationship.
- *The transpersonal relationship* as the timeless facet of the psychotherapeutic relationship, which is impossible to describe, but refers to the spiritual dimension of the healing relationship. (Clarkson, 1995)”

To measure the presence and relative weight of these constructs research teams at the University of Pennsylvania developed the Penn Helping Scale (Alexander & Luborsky 1986); at Vanderbilt, the Psychotherapy Process Scale and the Negative Indicators Scale (Suh, Strupp, & O'Malley 1986); and at Simon Fraser University, the Working Alliance Inventory. (Horvath & Greenberg 1986). These projects all based their work on the Bordin's (1976) three-factor operational definition of the helping, therapeutic, working alliance that consisted of interpersonal bond between the client and therapist. This is transference/counter transference without a pathological implication. Bordin further suggested the need for agreement between the client and therapist as to the goal of therapy and agreement as to the tasks required to accomplish this goal. From 1976, Bordin maintained that, to be effective, the therapeutic relationship must be collaborative, not hierarchical.

#### Measuring Therapy Outcome

Outcome evaluation has evolved from early opinions of the therapists, to complex testing using instruments including the MMPI (McCullough 1993), to semantic differential studies designed to cover all possible theories available and obfuscate the purpose to the measure to avoid contamination (Stiles 1980), to market driven consumer satisfaction surveys (Patterson & Leach 1987). Therapist opinion may be highly accurate or may be self serving in any given situation. A structured form of therapist opinion has been developed and normed over four decades and five versions of the Diagnostic and Statistical Manual. (DSM). The Global Assessment of Functioning (GAF) (APA 1994) is the most widely used outcome measure because it is the Axis 5 measure, required as part of the five-axis mental health diagnostic report. Its use has been increased by the demand of most HMO's and PPO's for use of the five-axis system.

The origin of the GAF is the Health Sickness Rating Scale (HSRS) developed in 1962. It consisted of thirty case studies and seven scales – “ability to function autonomously,” “seriousness of symptoms,” “degree of discomfort,” “effect on environment,” “utilization of abilities,” “quality of interpersonal relationships,” and “breadth and depth of interest.” A single score results as is true for the GAF. These scale concepts can still be identified in the descriptions of the levels of functioning in the GAF. The Global Assessment Scale (GAS) was a simplified form of the HSRS and has a .9 correlation with the HSRS. The GAS more closely resembles the GAF, in that it no longer has scales or case studies. The descriptions illustrate each 10-point range on a scale from 0 to 100. The GAF was identical to the GAS except it had a range of 0 to 90 in the DSM-III-R, however the scale has been returned to 0-100 in the DSM-IV. (McCullough 1993). Other recommended instruments to be included in a “core battery” are the Beck anxiety and depression inventories, the Hamilton anxiety and depression rating scales, the psychiatric status schedule, the social adjustment scale, the Health-Sickness rating scale, the MCMI, the Wisconsin Personality Disorders Inventory and such. These measures however are more appropriate to a clinical population that allows a statically significant range of change. Nations such as Australia and New Zealand who have social health care have conducted extensive outcome scale development and utilization studies (Eisen et al. 1999, Preston 2000). While these instruments are much more concise and economical than the battery of tests recommended by McCullough, they are again more geared to the outcome of clinical populations.

Consumer satisfaction is a business and marketing concept, which seems to have entered the health care environment with managed health organizations. Employee

Assistance Programs (EAP), social work and rehabilitation counseling seem to be on the leading edge of development of these instruments, however, reliability and validity has not been rigorously demonstrated. The consumer satisfaction survey is, nonetheless, the most appropriate outcome measure for this study of undergraduate students presenting with developmental and growth issues. Attkisson et. al (1982) developed a college student satisfaction form that was too specific in its items and too long (82 items) to be used in this study.

An outcome satisfaction questionnaire was developed for this study using the work Dansky, et al (1996) as a guideline. The items developed were submitted to a committee of experts (e.g., Delphi Method) for evaluation and were used by counselors and students in a pilot study at a local community college. Counselors and students were asked to respond to each item based on their experience at the counseling center and to offer content, wording, and face value feedback regarding each item. The resulting instrument consisted of two forms, one for participants, and one for facilitators. The participant form had 12 items, seven Likert-like items about satisfaction with the personal growth sessions outcome, two Likert-like items assessing the participant's self perceived computer competence, and one Likert-like item eliciting the participants' predicted future uses of computer-mediated counseling. Two items were open-ended qualitative questions requesting the participants' opinions about the personal growth sessions. The computer-mediated aspect was specifically targeted in the qualitative questions to allow the participant to appraise his or her experience regardless of assignment to conditions of the experiment. The facilitator version had similar session focused items but did not have the qualitative items, the computer competence items, or the predicted future use items.

This information was collected in personal interviews with the facilitators after they had completed their all of their sessions with participants.

### Application in this Study

The goal of this study is to contribute meaningful research to under-gird and advise the developing phenomena of Internet counseling. The foundation for good counseling has been developed over the past century and for good communication over the past many millennia. The advent of a new venue for communication and the willingness of mental health professional to move out into this venue should surprise no one. As counselors *boldly go where no one has gone before* - providing mental health services in cyberspace, research asks What is known about the new environment? What needs to be known? What risks can be anticipated? What risks cannot be anticipated? What known tools can be used as is? What needs to be retooled? What new tools need to be invented? No one study begin to answers do all that, of course. The purpose of existing professional literature is to suggest answers or directions to answers for some of these questions.

It seems clear from the literature that a rich very human culture has developed on the Internet over the past 30 years, initiated by graduate students at MIT, Stanford and 7 other prominent universities, who were given carte blanc to "see what could be done" with the new technology. Government initiates to provide health care to citizens in geographically remote areas and the commercial emergence of Internet use have paved the way for cyber-counseling. Cyber counseling appears to lend itself to brief therapy with non-crisis clients. Several years of cyber counseling practice have created a need for research to determine the efficacy of cyber counseling and to suggest predictive criteria for screening potential clients for appropriateness for cyber counseling. Many



questions need to be explored. There are several technologies that can be used - virtual reality, web-cam live transmissions, individual written messages (email), public written messages (bulletin boards), and live written messages (chat rooms). The Internet lends itself to group interaction, but individual intimacy is also well represented. The scope of this study was confined to individual therapy in a live (synchronic) written format. The individual differences the participant brings to the personal growth computer-mediated sessions were compared to those that they bring to traditional face-to-face sessions.

## CHAPTER 3 METHODOLOGY

### Statement of Purpose

The purpose of this study is to examine the efficacy of Internet counseling. Chat room counseling was compared with traditional face-to-face counseling. Similarities and differences were measures for therapist-participant alliance and for outcome. Four of the multitude of individual differences, gender, ethnicity, personality, and information processing, that each participant brings to the therapeutic setting, were measured to determine if any difference in impact can be discerned in the face-to-face or computer-mediated condition. This chapter presents the research hypotheses, dependent and independent variables, sample population, procedures for training the facilitators, procedures for the implementation of the personal growth sessions, instrumentation, experimental conditions and assignment to conditions, data collection and static analysis.

### Hypotheses

The study will test the following null hypotheses:

- Ho1: There is no significant difference in the client reported quality of the working alliance when counseling is delivered face-to-face or computer-mediated regardless of gender, ethnicity, personality style, learning style.
- Ho2: There is no significant difference in outcome efficacy when counseling is delivered face-to-face or computer-mediated regardless of gender, ethnicity, personality style, or learning style.
- Ho3a: There is no significant relationship between the client reported quality of the working alliance and gender in CM Counseling.

- Ho3b: There is no significant relationship between in the outcome efficacy and gender in CM Counseling.
- Ho3c: There is no significant relationship between the client reported quality of the working alliance and gender in F2F counseling.
- Ho3d: There is no significant relationship between the outcome efficacy and gender in F2F Counseling.
- Ho4a: There is no significant relationship between the client reported quality of the working alliance and ethnicity in CM Counseling.
- Ho4b: There is no significant relationship between the client reported outcome satisfaction and ethnicity in CM Counseling.
- Ho4c: There is no significant relationship between the client reported quality of the working alliance and ethnicity in F2F counseling.
- Ho4d: There is no significant relationship between the outcome efficacy and race/ethnicity in F2F Counseling.
- Ho5a: There is no significant relationship between the client reported quality of the working alliance and visualizing learning style in CM Counseling.
- Ho5b: There is no significant relationship between the client reported outcome satisfaction and visualizing learning style CM Counseling.
- Ho5c: There is no significant relationship between the client reported quality of the working alliance and verbalizing learning style in F2F counseling.
- Ho5d: There is no significant relationship between the outcome efficacy and verbalizing learning style in F2F Counseling.
- Ho6a: There is no significant relationship between the client reported quality of the working alliance and introversion in CM Counseling.
- Ho6b: There is no significant relationship between the client reported outcome satisfaction and introversion in CM Counseling.
- Ho6c: There is no significant relationship between the client reported quality of the working alliance and extraversion in F2F counseling.
- Ho6d: There is no significant relationship between the outcome efficacy and extraversion in F2F Counseling.

### Descriptions of Variables

The research design consists of random assignment of participants to one of two conditions. The conditions are face-to-face personal growth sessions and computer-mediated chat room personal growth sessions. Because the participants were randomly assigned to one of the two conditions, post-test only were used to measure the variables.

R0 3 face-to-face personal growth sessions      Posttests

R1 3 computer-mediated personal growth sessions      Posttests

The three sessions were conducted to facilitators who will work with an equal number of participants in each condition, that is, if a facilitator works with a total of 10 participants, he or she will conduct three sessions face-to-face with 5 participants, individually, and 5 sets of sessions via computer chat room. Ten graduate students representing a broad population of counselors (1 male, 9 females; 1 African American, 1 Hispanic; 3 licensed mental health counselors, 3 certified rehabilitation counselors; age range 23 to 56), from counselor education and rehabilitation counseling were hired and trained to conduct the personal growth sessions. The participants received extra credits in their counselor education interpersonal skills, substance abuse, or stress management classes, at the discretion of their instructor. The quality of the working alliance and the outcome satisfaction were measured to evaluate and compare the counseling experience in the two conditions. The individual differences that participants bring to the experience were measured to determine if any and which differences might predict better success with one condition or the other. For example, do introverted participants do better in one condition than they do in the other? Do African American participants benefit more from one condition than they do in the other? Is there any difference in the working alliance developed by participants with a verbal learning style in one condition versus the other?

This could be a valuable contribution to pre-screening criteria for clients who apply for computer-mediated counseling.

### Dependent Variables

There are two sets of dependent variables in this study, the participant perceived quality of the working alliance during counseling and the participant's report of outcome satisfaction with the personal growth counseling received plus the facilitators opinions on the same concepts. The working alliance is a process construct thought to describe the counselor-client relationship as it pertains to providing a helping environment for therapy to occur. It was measured with the Working Alliance Inventory. The clients' outcome satisfaction is a product construct that taps the results or benefits gained in therapy. It was measured with Outcome Satisfaction Questionnaire developed for this study and described above.

### Independent Variables

The independent variables race/ethnicity, gender, learning style and introversion/extroversion were investigated in this study. Ethnicity is an important variable because while the Internet makes democracy -- the free exchange of information and universal individual input - more available to many, there is realistic concern that some are marginalized because of limited access to technological resources and strategically administered corporate or organization control of resources (Mantovani, 2001, p. 51).

Gender has been suggested as a differential variable in cyberspace. Men have long dominated math, science and engineering careers. Internet access and savvy have grown out of training, familiarity and experience with computer technology. Therefore, there is concern that women have not had the exposure to computer technology to make

this form of communication and counseling available to them. There is also concern that as women are thought to be more relational in their orientation while men are more analytical, computer-mediated counseling may disadvantage female clients.

Learning styles that favor visual learning, written expressiveness and/or individual work may be more adaptive to Internet counseling while verbal learning, oral expressiveness and/or group work may be disadvantaged in a computer-mediated environment.

Personality type, likewise, may predispose some clients to more comfort and effectiveness using computer-mediated counseling and disadvantage others. The personality trait introversion/extroversion was an independent variable to determine if introversion is predictive of great outcome satisfactions than extroversion.

#### Population

The population was a southern university undergraduate population and from a community college in the same locale, with an age median of 20. This population is thought to be representative of computer users who use computers for social as well as technical purposes, have grown up in a technological age, and are of the age and social class most representative of computer users. Undergraduates volunteered for the study after hearing a presentation in their classroom, completing a contact sheet with demographic information, and signing an informed consent. They were provided with a duplicate of the informed consent form and were randomly assigned to personal growth sessions in either a face-to-face or computer-mediated counseling condition. Participants were enrolled in stress management, substance abuse, or interpersonal skill classes in the department of counsel education or in the student development classes at the community college. Students ( $N = 123$ ;  $M = 29$ ;  $F = 94$ ) were contacted by their facilitator and

scheduled for sessions. Upon the completion of three personal growth sessions, the participant completed the MBTI, the CITE, the WAI (c) and the OSQ (p) in an encrypted website monitored by a survey technician available in chat room 5 of the site who was trained to answer any questions about the mechanics of completing the instruments that arose. The facilitator, who was not the monitor, completed the WAI (t) and the OSQ (f).

### Sampling Procedures

Volunteers were recruited from the population of students enrolled in undergraduate counseling education classes in interpersonal skills and stress management. Most participants received a small amount (no more than 2% of grade) of class credit for participation and three sessions of personal growth guidance. Participants were quasi-randomly assigned to the twelve facilitators and were randomly assigned to face-to-face or computer-mediated study conditions. Exceptions were made to random assignment to facilitators if the facilitator knew the participant or if the facilitator and participant were unable to find a mutually convenient time to meet. The facilitator each conducted an equal number of face-to-face and computer-mediated sessions. Pre-induction paperwork included an informed consent, assurance that volunteers are at least 18 years of age, and provision of a code for confidential contact, a phone number, and/or an email address. All volunteers had adequate computer ability so that they could be randomly assigned to conditions. The university requires these skills of undergraduates and requires all undergraduates to own or have access to a computer with sufficient application software to participate in this study. The computer-mediated sessions were conducted in the university electronic learning gateway system WebCT. Many classes are offered or supplemented through this system so all students can be expected to learn how to use it at some point in their undergraduate career. The university has a computer

help desk for students who have any difficulty accessing or using the system and participants were notified of these services.

Midway through the study, the University moved WebCT to an authenticated server that required identification at log on. However, the university maintained the original server for studies such as this that require anonymous or coded logon. This did not negatively affect the study in any way because site appearance remained the same to the facilitators and because the participants had never seen the other system. When participants navigated to the WebCT home page, they found this among other studies listed individually with a link to the older server (e.g. Participants in the Groble dissertation study [click here](#)). The one possible confound was that the new server relieved the lag time problem encountered in the spring term when the old server was overloaded. Facilitators either did not notice or did not mention any difference. The lag was inconsistent in the spring depending on the time of day of appointments.. The lag occurred when the system was experiencing heavy use throughout the university. The facilitators may have adjusted their scheduling to minimize this problem.

#### Data Collection Procedures

The principal researcher established a dedicated, password secured web site with a text-talk (chat room) application for use by facilitators who conducted the personal growth sessions and data collection. Recruitment was conducted in the source classrooms during regularly scheduled class with the instructor's permission to discuss the study, explain the participants' rights to withdraw without harm, obtained informed consent and contact information. The principal researcher did not access to the web site once the study begins and each assistant was instructed how to secure his or her



participants' sessions. Sessions were downloaded with the permission of the participant for further research analysis outside the scope of this study.

Nine graduate students and one recent graduate from the Department of Counselor Education or the Department of Rehabilitation Counseling were trained in the study protocol, study logistics, cognitive behavior therapy principles, WebCT use, Internet Resources for clients, and research on the typical personal growth issues of undergraduates. All trainings were conducted in person by the principal investigator who prepared the extensive, detailed manual each facilitator received. Additional computer specific training was provided by the principal investigator and by University personnel familiar with the WebCT resources. The principal investigator coordinated with the instructors for the interpersonal communications, substance abuse, student development, and stress management classes to present the study during class early in the term and recruit participants. Participants were contacted individually, randomly assigning to one of the two conditions, scheduled for first session, given any direction needed for finding the counseling lab or WEBCT chat room. The principal investigator was available via beeper during any sessions to insure the safety of participant and availability to the graduate student facilitators. Facilitators received weekly supervision in accordance with their program requirements (practicum, research, registered intern, and such) and project design.

The participants presented genuine concerns common to college undergraduates such as but not limited to adjustment to college life, time management, study habits, career indecision, roommate relations, and so forth. The facilitator contacted each participant to set up the first meeting. He or she gave directions for participation. When

the participant was assigned to the face-to-face condition, the facilitator ensured that the participant understood where and when to meet with the facilitator. When the participant was assigned to the computer-mediated condition, the facilitator provided direction for the participant to log on to the chat room at the appropriate time and ensured that the participant understood how to log on to the system and navigate to the chat session space. The logistic of the experiment, detailed session outlines, record keeping forms, and the required readings list are located in the facilitators training manual in Appendix B.

### Instrumentation

#### Working Alliance Inventory (Client)

The Working Alliance Inventory Client (WAI c) is a 36 item developed by Horvath (1984b, 1986) to be used early in the relationships between the 3<sup>rd</sup> and 5<sup>th</sup> session. It was administered at the end of the 3<sup>rd</sup> session for purposes of this research. The Working Alliance Inventory targets the client-therapist relationship in a pan-theoretical approach. (Horvath et al. 1993 p. 255). It was designed to be counseling theory neutral while operationalizing Bordin's description of the three factor working alliance - tasks, goals, and bond (Horvath & Greenberg, 1986). The WAI consists of 36 items, 12 relating to each of the factors of the working alliance. The WAI, client version has a Hoyt's estimate of reliability of .88 for the goal and task subscales, a Hoyt's estimate of reliability of .85 for the bond subscale and a Cronbach's alpha of .93 for the composite (Horvath & Greenberg, 1986). Items are rated on a Likert-like scale from one being never to seven being always.

#### Sample items (Horvath, 1984b)

- "I find what I am doing in therapy confusing" (Tasks)
- "I am worried about the outcome of these sessions" (Goals)
- "(name of counselor) and I understand each other." (Bond)

The advantage of these measure are that they have forms for both the participant and the therapist providing the opportunity to view the therapeutic relationship through both lenses. The forms are attractive, well researched and easy to understand and complete with a minimum of time and effort on the part of the participant. The questions are non-threatening and non-intrusive while tapping all three aspects of the working relationship defined by Bordin and fundamental to all therapeutic relationship instruments examined.

#### Working Alliance Inventory (Therapist)

The Working Alliance Inventory Form T is the therapist version that assesses the therapist view of the working alliance across all three components of bond, task agreement and goal agreement.

Sample items (Horvath, 1984a)

"I feel uncomfortable with \_\_\_\_\_. (bond)

My client and I both feel confident about the usefulness of our current activity in therapy. (tasks)

\_\_\_\_\_ and I have a common perception of her/his goals. (goals)

#### Outcome Satisfaction Questionnaire

An outcome satisfaction questionnaire was developed for this study because outcome measure reviewed in the literature emphasized medical diagnosis and symptomatology or were site specific dealing with the mechanics of scheduling appointments and locating offices. Items for this outcome measure were written by the principle investigator or adapted from existing instrument where applicable. A committee of experts reviewed the potential items. A pilot study of the instrument was conducted at a local community college to gather feedback from students receiving counseling and from counselors regarding item wording, appropriateness, and face value. Information from the committee and from the community college study were

implemented into the final 12 item form developed for participants and 7 item form developed for facilitators. The facilitator form did not include qualitative questions found on the participant form.

Students rated their perception of their computer skills and their likelihood of seeking Internet counseling should they seek counseling in the future. They answered open-ended questions about what they least liked about computer-mediated communication as they had experienced it in this study and were encouraged to offer suggestions, comments, and ideas about the Internet interaction study. Facilitators were trained in adequate computer skills, as needed, before beginning their work on this project and were individually debriefed about the other points in end of study interviews.

#### Myers Briggs Type Indicator Form M (MBTI)

The MBTI is arguably the most researched and most widely used personality instrument. The Singer-Loomis Type Deployment Instrument (Singer 1996) and Keirsey Type Indicator (1984/1996) are similar Jungian theory based instruments but less researched and less often applied. The Keirsey Type Indicator is readily available on the Internet, although no longer free. The Singer-Loomis is still considered to be a research tool, and as such not used in applied setting such as business, counseling, and career development. The strength of the Singer-Loomis is that it is built upon a dynamic theory of personality growth and change rather than what has been seen as the rather static typing of the MBTI. The MBTI, however, was used in this study because the introversion/extroversion scale has consistently been found to have predictive and discriminative value. The Keirsey and Singer Loomis blend the four scales while the MBTI is more consistent with Jung's theory that introversion/extroversion is a attitude, while thinking/feeling and intuition/ sensing are traits. It is the introversion/extroversion

scale of the MBTI that was used in this study. Eysenck developed an introversion/extroversion scale as part of his three factors biologically based formulation of personality; however, it is more applicable to a clinical population than the population of this study.

The MBTI is statistically sound. The phi coefficient for reliability ranges from .55 to .65 for the introversion/extroversion dimensions; .64 to .53 for the sensing/intuiting dimension; .43 to .75 for the thinking/feeling dimension and .58 to .84 for the judging/perceiving dimension. The tetrachoric coefficients are higher, .70 to .81 for I/E; .82 to .92 for S/N; .66 to .90 for T/F and .76 to .84 for J/P. Reliability is found to increase with the population's age and intelligence. When the data were converted to continuous scores the reliability estimates are more consistent at .76 to .82 I/E; .75 to .87 S/N; .69 to .86 T/F and .80 to .84 J/P. (Willis, 1984). Table 11.1 (Myers & McCaulley 1993, pp. 177-206) describes the validity studies correlations between the MBTI and the Adjective Check List by scales, the California Psychological Inventory by scales, the Comrey Personality Scales, by scales, the Edwards Personality Preference Survey by scales, the Emotions Profile Index by scales, the Eysenck Personality Questionnaires by scales, the Maudsley Personality Inventory by scales, the Jungian Type Survey by scales, the Minnesota Multiphasic Personality Inventory by validity and clinical scales, the Omnibus Personality Inventory by scales, the Personality Research Inventory by scales, the Stein Self Description Questionnaire by scales, the Brown Self Report inventory by scales, the Sixteen Personality Factor Questionnaire by scales and by second order traits, the State-Trait Anxiety Inventory by state and trait, the Study of Values by scales, The Rokeach Dogmatism Scales, the Opinion, Attitude and Interest Scale by scales, the

Kuder Occupational Interest Survey by college major and occupational scales, the Strong-Campbell Interest Inventory (now known as the Strong Interest Inventory) by occupational themes, the Kolb Learning Style Inventory by scales, the Science Research Temperaments Scale, the Watson Glaser Critical Thinking Appraisal, and lesser known instruments including the Conflict Management, the Harbaugh (W)holistic Scales, the Internal-External Locus of Control and the Intolerance of Ambiguity. The body of work establishes the MBTI construct validity, divergent and convergent validity.

Center for Innovating Teaching Experiences Learning Styles Inventory (CITE)

The Center for Innovative Teaching Experience, Murdock Teacher Center, Wichita Kansas School District developed the Learning Style Inventory most prevalently used in education today. The CITE Learning Style Instrument is composed of 45 items that the respondent scores 4, 3, 2, or 1. A score of 4 on an item means that the respondent feels the statement is "most like me" while a score of 1 indicates that the statement is "least like me". Results were calculated for nine subscales, visual language, visual numerical, auditory language, auditory numerical, kinesthetic-tactile, social-individual, social-group, expressiveness-oral and expressiveness-written (Babich et al., 1976). For the purposes of this study, the visual numerical and auditory numerical are thought to be irrelevant to the counseling context but were analyzed in case they tap symbolic language. Items were scored for each category and significance or "major learning style" is determined by a cut score of 33 on any scale. The split-half reliabilities were .60 or better for eighty-five percent of the constructs.

Sample items (Babich et al., 1976)

- "I remember things I hear better than I read" (Auditory)
- "I would rather read a story than listen to it read." (Visual)

Richardson developed a visualize verbalizer scale; however, it has not been used outside research and is thought to be less applicable to this study than the visual and auditory scales of the CITE that has been widely used with adult populations and normed to the same population as this study. Richardson's scale was normed to a middle school population and the norming sample was small.

### Demographics

Participants were asked to indicate their age, gender, and race or races. It seems unlikely that the population of convenience have have any significant variance in age or gender but these questions were asked in case the perception of homogeneousness is erroneous. The age question was not relevant, however the gender question returned essential data. The ethnic composition of the population of this study was expected to be diverse and thought have significance in the working alliance and outcome of the face-to-face or computer-mediated sessions.

### Data Analyses Procedures

Data were analyzed using SPSS 11.0. ANOVA procedures were used to analyze the data because this procedure is sensitive to relationships between the independent variables, gender, ethnicity, learning style and personality traits and the dependent measures. Means and standard deviation were computed for all significant main effects and interactions to evaluate the efficacy of computer-mediated counseling compared to face-to-face counseling in the process dimension, working alliance and the outcome dimension efficacy.

## CHAPTER 4

### DATA ANALYSIS

The purpose of this study was to evaluate the efficacy of brief, cognitive behavioral therapy provided on the Internet in real time chat room modality. The study compared two sets of participants. Participants in one set met with the protocol trained graduate counseling student facilitators face-to-face. Participants in the other set met with protocol-trained graduate counseling student facilitators via the Internet in a University of Florida, WebCT, classroom chat room. All participants and all facilitators completed the dependent variable surveys via the Internet through the WebCT evaluation utility that provided anonymity for surveys. The chat room was set up so that participants entered by code rather than by name.

#### Descriptive Statistics for Dependent Measures

This study used four instruments as dependent variables. Two forms of The Working Alliance Inventory were used, form c for clients and form t for therapist. The Working Alliance Inventory provided a total score as well as three sub scores per version. The student version of the Outcome Satisfaction Questionnaire measure provided three scores and qualitative responses for future analysis. Common to both the participant form and facilitator form was the outcome satisfaction scale. In addition, participants estimated their computer use skill on a Likert-like scale and predicted the likelihood that they would choose computer-mediated counseling in the future. High scores indicate positive responses for the WAI while low scores report favorably on the OSQ. That is, the closer a participant's score is to the minimum for outcome satisfaction, predicted



future use, and computer skill the greater their positive response. The closer a person's score is on any of the WAI versions or scales is to the maximum, the more positive the response.

The data was evaluated using analyses of variance (ANOVA), that require that the independent variable or factor consist of two or more levels and that those levels cover all possible levels of interest to the researcher (e.g., male, female). The levels were qualitative (e.g., face-to-face, computer-mediated personal growth sessions) or quantitative (e.g., MBTI introversion/extraversion). The participant endorsed one and only one level of each factor. Each independent variable in this study met the criteria. The critical F value to disprove the Null hypothesis at the .05 confidence level is  $F_{(critical\ 1, 123)} = 3.92$ . The independent factors or variables were condition to which the participant was randomly assigned, ethnicity, gender, academic learning style, personality attitude, temperament learning style.

Table 1 depicts the meaningful descriptive statistics for the independent variables – gender, ethnicity, academic learning style, trait learning style, and attitude – and for the dependent variables – working alliance, by scales, outcome satisfaction, predicted future use, and computer/Internet skill level. The table is organized by experimental conditions, face-to-face and computer-mediated treatments. Table 2 presents the factors and levels of each factor used in the analyses of variance.

#### Participant Dependent Variables Analysis

To evaluate outcome efficacy, participants were asked to evaluate the quality of their experience in the face-to-face or computer-mediated conditions and their outcome satisfaction. They were asked to predict if they thought they would be likely to use computer-mediated counseling in the future. They were asked to describe their comfort

and skill level with using a computer and using the Internet. To allow the researcher to examine the process efficacy of these sessions in the two conditions, participants answered questions about their total evaluation of the working alliance they co-created with their facilitator.

Table 1 Descriptive Statistics for Dependent Variables by Conditions

Variables	N	Minimum	Maximum	Mean	Std. Deviation
FACE-TO-FACE CONDITION					
WAI Task (client)	59	7	44	32.88	8.748
WAI Bond (client)	59	14	60	46.00	10.609
WAI Goal (client)	59	2	36	25.05	8.330
WAI Total (client)	59	23	140	103.93	24.676
Satisfaction (participant)	59	7	27	12.64	4.877
Computer Skill participant)	59	2	7	4.00	1.218
Predicted future use (participant)	59	0	3	.95	.705
WAI Task (therapist)	58	-4	42	27.74	9.049
WAI Bond (therapist)	58	30	60	49.31	8.217
WAI Goal (therapist)	58	-14	33	18.74	10.597
WAI Total (therapist)	58	17	127	95.79	25.360
Satisfaction (therapist)	58	8	23	15.83	3.738
COMPUTER-MEDIATED CONDITION					
WAI Task (client)	64	11	44	31.27	8.016
WAI Bond (client)	63	23	60	45.67	8.160
WAI Goal (client)	63	3	36	24.13	7.722
WAI Total (client)	63	52	137	101.22	21.372
Satisfaction (participant)	63	7	24	13.76	4.294
Computer Skill participant)	63	2	10	4.27	1.096
Predicted future use (participant)	63	0	2	.70	.687
WAI Task (therapist)	63	2	44	28.65	9.172
WAI Bond (therapist)	63	34	60	48.86	7.118
WAI Goal (therapist)	63	-8	36	19.57	10.171
WAI Total (therapist)	63	29	137	96.84	24.022
Satisfaction (therapist)	64	7	25	16.42	4.227

The inventory subscales indicated the strength of the personal relationship (bond), the mutual creations of tasks, which would lead to accomplishing the goal set for these

sessions, and ability to delimit, define and specify a goal. The results of their responses are discussed in the text below and displayed in tables three through twenty-four below.

Table 2: Independent Variables, Levels of Each Variable and Number of Participants at Each Level

Factors	Levels	Number of participants
Conditions	Face-to-face	58
	Computer-mediated	64
Gender	Male	29
	Female	94
Ethnicity	Caucasian	94
	African American	12
	Hispanic	17
Academic Learning Styles	Visual learners	30
	Verbal learners	93
Introversion/ Extraversion	Extraverts	88
	Introverts	35
Temperament Learning Styles	Intuitive Thinking (NT)	18
	Intuitive Feeling (NF)	53
	Sensing Judging (SJ)	41
	Sensing Perceiving (SP)	11

#### Predicted future use (participant)

Participants were asked to predict the likelihood that they would choose computer-mediated counseling should they decide to seek out counseling of their own volition rather than being randomly assigned to a condition as in the present study. Table 3 shows the results of the ANOVA. The main effect, learning style, was significant ( $F = 4.25, p = .042$ ) but no interactions between face-to-face or computer-mediated counseling and the independent variables were significant.

To further analyze the relationship between academic learning style preference and predicted use, follow up tests were applied. For this variable, the lower value indicates preference and the higher the score indicates negative responses.

Table 3 Source Table Dependent Variable —participant predicted future use of computer-mediated counseling

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.673	17	.451	.897	.580
Intercept	15.869	1	15.869	31.520	.000
Condition	.280	1	.280	.556	.457
Gender	.319	1	.319	.633	.428
Ethnicity	6.576E-02	2	3.288E-02	.065	.937
Academic Learning Style	2.141	1	2.141	4.253	.042
Introversion/Extraversion	8.222E-04	1	8.222E-04	.002	.968
Temperament Learning Style	1.139	3	.380	.754	.522
Condition by Gender	2.739E-02	1	2.739E-02	.054	.816
Condition by Ethnicity	.319	2	.159	.317	.729
Condition by Academic Learning Style	.113	1	.113	.224	.637
Condition by Introversion/ Extraversion	.606	1	.606	1.204	.275
Condition by Temperament Learning Style	.309	3	.103	.205	.893
Error	52.360	104	.503		
Total	142.000	122			
Corrected Total	60.033	121			

Table 4 displays the resulting means and standard deviation. Those who use a visual learning style predicted that they would be more likely to seek computer-mediated counseling should they need counseling in the future ( $M = .56$   $SD = .58$ ), consistent with the study hypothesis that visualizers would be more likely to seek computer-mediated counseling than verbal or auditory learners ( $M = .89$ ,  $SD = .72$ ).

Table 4. Means and Standard Deviation for Significant Main Effect Academic Learning Styles; Dependent Variable — Predicted Future Computer-Mediated Counseling Use

Academic Learning Style Preference	Mean	Std. Deviation
Visual learners	.56	.583
Verbal learners	.89	.720

### Level of Computer/Internet Skill

Academic learning style produced a significant main effect when participants were asked to describe their level of comfort using computer and the Internet and their computer and Internet skill level ( $F = 3.95, p = .049$ ). Table 5 depicts all of the results of the analysis for this dependent variable. The lower scores indicated greater comfort and skill while the higher scores indicate less comfort. Participants who endorsed the visual learning style preference estimated their computer skill to be more limited ( $M = 4.56, SD = 1.53$ ) than did participants who endorsed the verbalizer or auditory learning style preference ( $M = 4.03, SD = 1.03$ ), contrary to expectation. Verbalizers had better skills and greater comfort but visualizers predicted greater future use.

Table 5. Source table for dependent variable—computer/internet skill level (participant)

Sources of Variance	Type III Sum of Squares	df	Mean Square	F Sig.
Corrected Model	28.445	17	1.673	1.297.209
Intercept	532.841	1	532.841	412.975.000
Condition	.804	1	.804	.623.432
Gender	2.929	1	2.929	2.270.135
Ethnicity	4.740	2	2.370	1.837.164
Academic Learning Style	5.100	1	5.100	3.953.049
Introversion/ Extraversion	5.866E-02	1	5.866E-02	.045.832
Temperament Learning Style	4.434	3	1.478	1.145.334
Condition by Gender	7.398E-02	1	7.398E-02	.057.811
Condition by Ethnicity	.876	2	.438	.340.713
Condition by Academic Learning Style	2.417	1	2.417	1.873.174
Condition by Introversion/ Extraversion	.282	1	.282	.218.641
Condition by Temperament Learning Style	4.021	3	1.340	1.039.379
Error	134.186	104	1.290	
Total	2253.000	122		
Corrected Total	162.631	121		

a R Squared = .175 (Adjusted R Squared = .040)

This result is interesting and should be interpreted with caution because it is likely that the instrument eliciting skills and comfort may need to be enhanced for greater accuracy (see discussion, chapter 5).

Table 6. Means and Standard Deviation –Dependent Variable, level of computer/ Internet skill and comfort (participant), Independent Variable, academic learning style.

Academic Learning Style	Mean	Std. Deviation
Visualizer	4.56	1.530
Verbalizer	4.03	1.025

#### Outcome Satisfaction (Participant)

Participants' responses about their outcome satisfaction did not produce any significant main effect or interaction in the outcome satisfaction measure (Table 7).

Table 7. Source table for dependent variable —outcome satisfaction (participant)

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	356.389	17	20.964	.989	.476
Intercept	5308.807	1	5308.807	250.434	.000
Condition	16.177	1	16.177	.763	.384
Gender	25.548	1	25.548	1.205	.275
Ethnicity	84.967	2	42.484	2.004	.140
Academic Learning Style	7.598	1	7.598	.358	.551
Introversion/ Extraversion	9.763	1	9.763	.461	.499
Temperament Learning Style	59.018	3	19.673	.928	.430
Condition by Gender	31.766	1	31.766	1.499	.224
Condition by Ethnicity	29.799	2	14.899	.703	.498
Condition by Academic Learning Style	5.441E-02	1	5.441E-02	.003	.960
Condition by Introversion/ Extraversion	24.616	1	24.616	1.161	.284
Condition by Temperament Learning Style	24.496	3	8.165	.385	.764
Error	2204.636	104	21.198		
Total	23887.000	122			
Corrected Total	2561.025	121			

a R Squared = .167 (Adjusted R Squared = .021)

The most positive outcome satisfaction score possible was seven. The score indicating the greatest possible dissatisfaction with the experience was twenty-eight. The observed

score range was from seven to twenty-seven in the face-to-face condition ( $M = 12.64$ ,  $SD = 4.88$ ) and from seven to twenty-four in the computer-mediated condition ( $M = 13.76$ ,  $SD = 4.29$ ). This does not mean that the participants were dissatisfied with their experience but that the measure of satisfaction did not detect any independent variables that influenced satisfaction. In other words, the participants were equally satisfied in either experimental condition and regardless of individual differences.

#### Working Alliance Inventory Total (Client)

The Working Alliance Inventory provided four measures, a total rating, and three subscale scores. The subscales measured bond, similar to rapport, agreement on goal to be achieved in counseling, and agreement of task(s) to be developed to accomplish the agreed upon goal of this episode of brief counseling. There were no significant main effects or interactions for the dependent variable WAI (c) total score (Table 8).

Table 8. Source table for dependent variable — WAI (c) Total score

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9574.904	19	503.942		.947.528
Intercept	216085.736	1	216085.736	406.031	.000
Condition	521.780	1	521.780	.980	.324
Gender	153.238	1	153.238	.288	.593
Ethnicity	817.424	2	408.712	.768	.467
Academic Learning Style	1251.056	2	625.528	1.175	.313
Introversion/ Extraversion	109.434	1	109.434	.206	.651
Temperament Learning Style	1433.145	3	477.715	.898	.445
Condition by Gender	817.339	1	817.339	1.536	.218
Condition by Ethnicity	833.397	2	416.698	.783	.460
Condition by Academic Learning Style	36.584	2	18.292	.034	.966
Condition by Introversion/ Extraversion	206.308	1	206.308	.388	.535
Condition by Temperament Learning Style	2112.052	3	704.017	1.323	.271
Error	54618.875	104	525.181		
Total	1346441.000	122			
Corrected Total	63858.369	121			

a R Squared = .126 (Adjusted R Squared = -.026)

### Working Alliance Inventory Bond (Client)

There were no significant main effects or interactions for the dependent variable working alliance (c) bond,(Table 9).

### Working Alliance Inventory Task (Client)

There were no significant main effects for independent variables by WAI (c) task sub scale (Table 10), however there was a significant interaction between condition and gender ( $F = 3.92, p = .05$ ). Unlike the scores on the Outcome Satisfaction Questionnaire, where lower scores were more positive than higher scores, the Working Alliance Inventory is scored so that the higher the score the greater the positive response. Table 11 shows the means and standard deviation for gender by condition.

Table 9. Source table for dependent variable —WAI (c) Bond sub score

Sources of Variance	Type III Sum of Squares	df	Mean Square	F Sig.
Corrected Model	1550.132	19	81.586	.914 .568
Intercept	43334.786	1	43334.786	485.237 .000
Condition	2.012E-04	1	2.012E-04	.000 .999
Gender	9.003	1	9.003	.101 .752
Ethnicity	312.180	2	156.090	1.748 .179
Academic Learning Style	180.325	2	90.162	1.010 .368
Introversion/ Extraversion	6.755	1	6.755	.076 .784
Temperament Learning Style	461.944	3	153.981	1.724 .167
Condition by Gender	7.433	1	7.433	.083 .774
Condition by Ethnicity	232.154	2	116.077	1.300 .277
Condition by Academic Learning Style	18.941	2	9.471	.106 .899
Condition by Introversion/ Extraversion	.261	1	.261	.003 .957
Condition by Temperament Learning Style	358.995	3	119.665	1.340 .266
Error	9109.254	102	89.306	
Total	266883.000	122		
Corrected Total	10659.385	121		

a R Squared = .123 (Adjusted R Squared = -.030)

Male participants reported greater task development congruity ( $M = 34.14, SD = 8.32$ ) with their facilitator in the face to face than in the computer-mediated sessions ( $M =$



27.00, SD = 8.63), by almost one standard deviation. This suggests that males were better able to define tasks needed to achieve their personal growth goals in the face-to-face condition than in the computer-mediated condition, a finding contrary to expectations. Female participants seem to develop tasks in collaboration with their facilitator equally well in either condition. ( $M = 23.49$ ,  $SD = 8.93$ ;  $M = 23.57$ ,  $DS = 7.43$ )

Table 10 Source table for dependent variable —Working Alliance Inventory (c) Task sub score

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1498.521	19	78.870	1.158	.308
Intercept	21142.080	1	21142.080	310.493	.000
Condition	158.147	1	158.147	2.323	.131
Gender	20.758	1	20.758	.305	.582
Ethnicity	60.911	2	30.455	.447	.641
Academic Learning Style	105.094	2	52.547	.772	.465
Introversion/ Extraversion	114.795	1	114.795	1.686	.197
Temperament Learning Style	26.789	3	8.930	.131	.941
Condition by Gender	267.312	1	267.312	3.926	.050
Condition by Ethnicity	130.877	2	65.438	.961	.386
Condition by Academic Learning Style	1.544	2	.772	.011	.989
Condition by Introversion/ Extraversion	65.358	1	65.358	.960	.330
Condition by Temperament Learning Style	294.627	3	98.209	1.442	.235
Error	6945.380	102	68.092		
Total	134398.000	122			
Corrected Total	8443.902	121			

a R Squared = .177 (Adjusted R Squared = .024)

Table 11. Means and Standard Deviation —Dependent Variable, WAI (c) task sub score  
Independent Variable, Gender

	Male	Female
Face-to-face	M = 34.14 S.D. = 8.32	M = 32.49 S.D. = 8.93
Computer-mediated	M = 27.00 S.D. = 8.63	M = 32.57 S.D. = 7.43

Working Alliance Inventory client subscale goal

There were no significant main effects or interactions for the dependent variable working alliance total, participant version. Table 12 lists relevant statistics.

Table 12. Source table for dependent variable —WAI (c) Goal sub score

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1176.827	19	61.938	.961	.512
Intercept	12382.566	1	12382.566	192.211	.000
Condition	105.700	1	105.700	1.641	.203
Gender	23.255	1	23.255	.361	.549
Ethnicity	14.336	2	7.168	.111	.895
Academic Learning Style	161.415	2	80.707	1.253	.290
Introversion/ Extraversion	5.503	1	5.503	.085	.771
Temperament Learning Style	231.919	3	77.306	1.200	.314
Condition by Gender	90.501	1	90.501	1.405	.239
Condition by Ethnicity	102.026	2	51.013	.792	.456
Condition by Academic Learning Style	6.826	2	3.413	.053	.948
Condition by Introversion/ Extraversion	33.275	1	33.275	.517	.474
Condition by Temperament Learning Style	208.935	3	69.645	1.081	.361
Error	6571.010	102	64.422		
Total	81420.000	122			
Corrected Total	7747.836	121			

R Squared = .152 (Adjusted R Squared = -.006)

Facilitator Dependent Variable Analysis

Facilitators completed the facilitator's version of the Working Alliance Inventory and of the Outcome Satisfaction Questionnaire. Unlike participants, the facilitators were not asked to report their predicted future use and computer/Internet skill and comfort levels in these surveys. Those factors were discussed at length in individual debriefing sessions with each facilitator, but do not appear in these analyses.

### Outcome Satisfaction

Facilitator scores on the Outcome Satisfaction measure demonstrated statistically significant for the main effect gender so follow up analysis was conducted. Table 10a displays the ANOVA outcome while Table 10b presents the means and standard deviation for the significant main effect.

Facilitators reported that female participants experienced greater overall outcome satisfaction (mean 15.55, standard deviation 3.7) with their personal growth sessions than did male participants (mean 18.03, standard deviation 4.4). There was no significant interaction by condition suggesting that this facilitator perceived gender related outcome satisfaction did not differ by condition

Facilitators perceived that female participants experienced greater outcome satisfaction with their personal growth sessions. However, there was no significant difference in participants' report of outcome satisfaction (see Table 5).

Table 13. Source table for dependent variable — Outcome Satisfaction (facilitator)

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	338.795	19	17.831	1.140	.324
Intercept	6252.829	1	6252.829	399.917	.000
Condition	3.410	1	3.410	.218	.642
Gender	111.186	1	111.186	7.111	.009
Ethnicity	.793	2	.397	.025	.975
Academic Learning Style	22.924	2	11.462	.733	.483
Introversi on/ Extraversi on	1.074E-02	1	1.074E-02	.001	.979
Temperament Learning Style	23.115	3	7.705	.493	.688
Condition by Gender	11.576	1	11.576	.740	.392
Condition by Ethnicity	13.402	2	6.701	.429	.653
Condition by Academic Learning Style	20.864	2	10.432	.667	.515
Condition by Introversi on/ Extraversi on	27.036	1	27.036	1.729	.192
Condition by Temperament Learning Style	65.180	3	21.727	1.390	.250
Error	1563.530	100	15.635		
Total	32911.000	120			
Corrected Total	1902.325	119			

Follow up analyses were conducted (Table 14) and found that facilitators felt that male participants experienced less outcome satisfaction ( $M = 18.03$ ,  $SD = 4.39$ ) than did female participants ( $M = 15.55$ ,  $SD = 3.70$ ).

Table 14 Means and Standard Deviation for gender variable  
Dependent Variable: Facilitator perceived outcome satisfaction

GENDER	Mean	Std. Deviation
Male	18.03	4.387
Female	15.55	3.696

#### Working Alliance Inventory total (therapist)

Analysis of variance for dependent variable, working alliance inventory (f) total score, a composite of bond, task, and goal, produced significant the main effects for gender ( $F = 7.11$ ),  $p = .009$ ).

Table 15. Source of Variance Table — Dependent Variable: Working Alliance Inventory total (therapist)

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11899.169	17	699.951	1.190	.286
Intercept	223760.842	1	223760.842	380.508	.000
Condition	1812.589	1	1812.589	3.082	.082
Gender	5178.639	1	5178.639	8.806	.004
Ethnicity	268.679	2	134.339	.228	.796
Academic Learning Style	20.833	1	20.833	.035	.851
Introversion/ Extraversion	260.169	1	260.169	.442	.507
Temperament Learning Style	682.333	3	227.444	.387	.763
Condition by Gender	1660.391	1	1660.391	2.824	.096
Condition by Ethnicity	552.180	2	276.090	.469	.627
Condition by Academic Learning Style	336.556	1	336.556	.572	.451
Condition by Introversion/ Extraversion	.646	1	.646	.001	.974
Condition by Temperament Learning Style	1337.318	3	445.773	.758	.520
Error	60569.938	103	588.058		
Total	1195491.000	121			
Corrected Total	72469.107	120			

### Working Alliance Inventory Bond (therapist)

Table 17 shows that the gender variable produced a significant main effect in the facilitator scores for bond ( $F = 9.97, p = .002$ ). Gender by condition was a significant interaction in the WAI (t) task sub score ( $F = 7.33, p = .008$ ). The significant interaction between gender and condition in the facilitator version is on the sub scale bond.

The Mean and Standard Deviation for the gender main effect is not reported because it is superceded by the significant gender by condition interaction presented in Table 18. Facilitators recognized a stronger sense of rapport on bond with female participants than they did with male participants. Since the participants, (Table 7), did not indicate any significance in the strength of bond developed it may be that the female participants were better able to communicate the sense of bond to their facilitator even though male participants seem to have experienced a similar level of bond.

Table 16: Means and Standard Deviation for Main Effect Gender —Dependent Variable: Working Alliance Inventory (t) total

Gender	Mean	Std. Deviation
Male	83.83	34.118
Female	100.28	19.303

The interaction of gender by condition an important finding in this study that seeks to identify potential sources of individual differences that may impact the value of computer-mediated counseling and may be used as a screening factor. It would appear that male participants were better able to develop and communicate that development of rapport with their facilitator in the computer-mediated condition ( $M = 49.33, SD = 7.64$ ) than in the face-to-face condition ( $M = 42.86, SD = 8.51$ ), while female participants were

almost equally able to develop or communicate the development in either condition. This is consistent with the study hypotheses

Table 17: Source table for dependent variable – Working Alliance Inventory bond (t)

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1251.611	17	73.624	1.320	.195
Intercept	63658.408	1	63658.408	1141.364	.000
Condition	22.037	1	22.037	.395	.531
Gender	556.044	1	556.044	9.970	.002
Ethnicity	49.859	2	24.930	.447	.641
Academic Learning Style	.181	1	.181	.003	.955
Introversion/ Extraversion	29.460	1	29.460	.528	.469
Temperament Learning Style	17.346	3	5.782	.104	.958
Condition by Gender	408.880	1	408.880	7.331	.008
Condition by Ethnicity	97.366	2	48.683	.873	.421
Condition by Academic Learning Style	54.961	1	54.961	.985	.323
Condition by Introversion/ Extraversion	67.525	1	67.525	1.211	.274
Condition by Temperament Learning Style	54.236	3	18.079	.324	.808
Error	5744.720	103	55.774		
Total	298400.000	121			
Corrected Total	6996.331	120			

a. R Squared = .179 (Adjusted R Squared = .043)

Table 18 Mean and standard deviation for gender by condition interaction  
Dependent Variable: Working Alliance Inventory bond

	Male	Female
Face to Face	Mean = 42.86 s.d. = 8.51	Mean = 51.66 s.d. = 6.69
Computer Mediated	Mean = 49.33 s.d. = 7.64	Mean = 48.69 s.d. = 7.27

#### Working Alliance Inventory Task (therapist)

Analysis of the WAI (t) task sub score resulted in two significant main effects, condition ( $F = 4.81$ ,  $p = .03$ ) and gender ( $F = 5.87$ ,  $p = .02$ ). Facilitators reported more collaborative task development with female participants than they did with male

participants. Note that the participants did not indicate any significant main effect (see Table 10) for task development however their responses did produce a significant interaction (see Table 11) for gender by condition not found in the facilitator scores.

Table 19 Source table for dependent variable —Working Alliance Inventory (t) task

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1796.808	17	105.695	1.342	.182
Intercept	18699.182	1	18699.182	237.440	.000
Condition	378.907	1	378.907	4.811	.031
Gender	463.005	1	463.005	5.879	.017
Ethnicity	14.136	2	7.068	.090	.914
Academic Learning Style	3.797	1	3.797	.048	.827
Introversion/ Extraversion	26.073	1	26.073	.331	.566
Temperament Learning Style	209.490	3	69.830	.887	.451
Condition by Gender	63.889	1	63.889	.811	.370
Condition by Ethnicity	230.013	2	115.006	1.460	.237
Condition by Academic Learning Style	134.671	1	134.671	1.710	.194
Condition by Introversion/ Extraversion	27.713	1	27.713	.352	.554
Condition by Temperament Learning Style	281.066	3	93.689	1.190	.317
Error	8111.606	103	78.753		
Total	106234.000	121			
Corrected Total	9908.413	120			

a. R Squared = .181 (Adjusted R Squared = .046)

Table 20: Means and Standard Deviation for gender variable  
Dependent Variable: Working Alliance Inventory<sup>a</sup> task (therapist)

Gender	Mean	Std. Deviation
Male	23.97	12.774
Female	29.55	7.149

Facilitators also noted stronger task collaboration in the computer-mediated condition than in the face-to-face condition. It is intriguing that both facilitators and participants reported gender differential in this dependent variable although they did not identify it in the same manner. Gender clearly is a factor which influences process and outcome efficacy in computer-mediated sessions.

Table 21 Means and Standard Deviation for condition variable  
Dependent Variable: Working Alliance Inventory task (therapist)

Condition	Mean	Std. Deviation
Face to face	27.74	9.049
Computer mediated	28.65	9.172

#### Working Alliance Inventory Goal (therapist)

Again, as in the task sub scale, the facilitators reported significant main effects for the variables condition ( $F = 4.01$ ,  $p = .048$ ) and gender ( $F = 7.34$ ,  $p = .008$ ) in the goal sub scale (Table 22). Means and standard deviation for condition and for gender are reported in Table 23.

Table 22 Tests of Between-Subjects Effects  
Dependent Variable: Working Alliance Inventory goal (therapist)

Sources of Variance	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2412.598	17	141.918	1.402	.151
Intercept	7347.594	1	7347.594	72.611	.000
Condition	406.032	1	406.032	4.012	.048
Gender	742.524	1	742.524	7.338	.008
Ethnicity	53.847	2	26.924	.266	.767
Academic Learning Style	7.147	1	7.147	.071	.791
Introversion/ Extraversion	37.032	1	37.032	.366	.547
Temperament Learning Style	91.743	3	30.581	.302	.824
Condition by Gender	147.608	1	147.608	1.459	.230
Condition by Ethnicity	318.927	2	159.463	1.576	.212
Condition by Academic Learning Style	186.915	1	186.915	1.847	.177
Condition by Introversion/ Extraversion	6.964	1	6.964	.069	.794
Condition by Temperament Learning Style	488.334	3	156.111	1.543	.208
Error	10422.757	103	101.192		
Total	57318.000	121			
Corrected Total	12835.355	120			

a. R Squared = .188 (Adjusted R Squared = .054)

Female participants were perceived to have or at least to have communicated greater session goal definition ( $M = 20.72$ ,  $SD = 8.48$ ) than did males participants ( $M = 14.28$ ,  $SD = 13.86$ )



Table 23: Means and Standard Deviation for gender variable  
Dependent Variable: Working Alliance Inventory goal (therapist)

Gender	Mean	Std. Deviation
Male	14.28	13.864
Female	20.72	8.477

Facilitators thought that participants, regardless of individual difference, showed greater abilities to formulate and define goals in the computer-mediated condition ( $M = 19.75$ ,  $SD = 10.17$ ) than in the face-to-face condition ( $M = 18.74$ ,  $SD = 10.60$ ). Goal definition is extremely important in evaluating efficacy because unless the goal is rather specific it is difficult to assess its achievement.

Table 24 Means and Standard Deviation for independent variable condition, dependent Variable: Working Alliance Inventory goal (therapist)

Condition	Mean	Std. Deviation
Face to face	18.74	10.597
Computer mediated	19.57	10.171

In summary, condition, gender, and academic learning style were the independent variables that showed statistically significant main effects in the scales evaluated. Gender by condition was the only significant interaction and occurred in both participant and facilitator measures. From the participants' perspective, visual learners predicted greater likelihood of seeking computer-mediated mental health services if they a needed in the future than did verbal learners. Paradoxically, verbal learners indicated that they had greater computer and Internet skills than did visual learners. Participants' responses indicated that males were better able to collaboratively develop tasks with their facilitators to use to achieve their personal growth goal in the computer-mediated

condition than in the face-to-face condition. Females were able to develop tasks equally well in either condition.

From the facilitators' point of view, female participants were better able to develop an overall working alliance, than males. Female were better able to collaborative develop goal oriented tasks, than males (perhaps because they were equally good at developing task in each condition). Females were better able to define their goal for the personal growth sessions. There were significant findings for experimental condition. Males were better able to develop a bond with their facilitators in the computer-mediated condition. Task development was better achieved in the computer-mediated condition. Goal definition was more precise in the computer-mediated condition. While the evidence is not definitive, it is certainly consistent enough to suggest that individual differences do contribute to counseling process and outcome efficacy and should be further investigated.

#### Qualitative Analysis

Comprehensive qualitative analysis of the data collected is outside the scope of this project. However, some material is presented to illustrate and confirm the constructs presented in Chapter 2 - presence, trustworthiness, and intimacy. Some participants expressed positive reactions to their experiences in the computer-mediated condition. Comments from participants are replicated without change except when it was necessary to replace the facilitator's name with *facilitator* in two comments. Grammar and spelling are explicitly overlooked for the sake of spontaneous communication during a session therefore those "errors" remain in the survey comments. The surveys were all completed on the Internet, and participants reasonably responded with the same disregard for writing mechanics as those in the computer sessions has been instructed to do.

Presence — “It was cool to be able to just log online to talk, it was easily accessible, but instant messages sometimes lack tone of voice that can make it more difficult to understand the subtleties or conversation. plus, in some ways the anonymity of doing it over the computer was nice, i could cry or whatever without feeling watched and i could talk from the privacy of my own home that was both good and bad, good cause it was a comfortable place, bad because afterwards i couldn't leave some . . .”

Trustworthiness — “I just really realized how helpful it is to talk to someone who is totally objective and knows nothing, or has made no judgments, about you. It was really cool to have *facilitator* because he went through some of the problems that I am going through right now, and he was able to disclose his experience with me and make me feel better about my decisions”

Intimacy — I feel that using the computer was nice, it gave you a way to communicate, without feeling self conscious about what was being said”

Other students were less happy with their computer-mediated experience.

Presence — “I think this is great to look at. However, I feel that the computer is an inefficient way to communicate thoughts to another person due to the ambiguous nature of the internet”

“Having the counseling sessions over the computer made it seem as if we were wasting some of our time. There was sometimes a lag in the chat room, and I would often sit waiting to see what the facilitator had to say. I feel that the sessions might have been more productive in person. Further, I did not feel very comfortable having to type my feelings on the computer. It was a bit strange having to type “I am smiling” “I am laughing”, ect”

“I did not like the internet sessions that much because I tended to forget to sign on line. If I had an appointment to go to I feel that I would remember better. Also, you could not see facial expressions or how the other person was feeling at the time. This is hard when you are”

“There were times that I didn't know how to put what I felt into words. I feel that if I had been in an actual office with a therapist they may have been able to lead me through my feelings and putting them into words. I think that when it comes down to it a person needs the one on one that an in office session gives.”

Trustworthiness — “ The computer is not always reliable and to think that therapy will be given through the internet is depressing”

Intimacy — “not getting the comfort of being in the same room as someone who is listening and caring”

Ambivalent responses included:

“*Facilitator* was very good and I felt very comfortable with her. I think I would have preferred to be in-person though.”

“When online with your therapist you never know what they are doing, thinking or saying at that moment. Being online takes away the personal aspect of it. However, I do think that the computer sessions would be a good back up like if the person had to go out of town on business or something”

Some participants offered observations about the mechanics of Internet counseling that can get in the way of counseling.

“Most people think faster than they can type so it can be frustrating in the chat rooms at times. You have a lot to say but it takes a long time to get it out. Much different than talking on the phone or in person”

“Having to type stories that are really long”

“ I had some distractions in my room when we were talking.”

“it felt like a lot of time was wasted waiting for messages to go back and forth cause i was using my home dial-up computer that is sometimes alot slower than a T3 or dsl connection”

## CHAPTER 5

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to explore the efficacy of Internet counseling and the impact of individual differences on that efficacy. This chapter summarizes the study, discusses the results and offers conclusions, and recommendations for further study.

#### Summary of the Study

This study was conducted in Florida with undergraduate student participants and graduate student facilitators from a university and a community college in the same municipality. One hundred and twenty one students volunteered to participate in three personal growth sessions and completed the sessions and five surveys (demographics, learning style, personality traits, working alliance, and outcome satisfaction). They were randomly assigned to either the face-to-face or the computer-mediated condition. The ten counseling graduate student facilitators were trained and provided with a detailed procedure manual and report forms. Each facilitator worked with an equal number of students in each condition. Analyses of Variance were conducted using individual differences – gender, ethnicity, learning style, and personality traits as the independent variables. Follow up tests were conducted to analyze variables that demonstrated a significant main effect or interactions.

#### Conclusions

Six hypotheses were examined and the results will be discussed individually.

Hypothesis I.. The null hypothesis that there is no difference between face-to-face and

computer-mediated counseling when process factors are compared was partially disproved with regard to gender, task and bond.

Hypothesis II The null hypothesis that there is no difference between face-to-face and computer-mediated counseling when outcome satisfaction is compared was disproved for gender as viewed by the facilitator.

Hypothesis III The hypothesis that a gender differential affects efficacy in counseling in general and between face-to-face and computer-mediated counseling was supported on several measures. From the facilitators' perspective, gender affected outcome satisfaction, with men reporting greater outcome satisfaction regardless of condition and greater task congruity with their facilitators in the face-to-face condition. This is contrary to expectation because the previous research literature suggested that men are less willing to seeking counseling. Therefore, it was hypothesized that males would be more comfortable with and more successful in the computer-mediated condition. Results of this study suggest that although men are less likely to seek counseling as previously reported, when they do seek counseling they prefer it to be face-to-face.

The study indicated that males were less willing to engage in even mild counseling or personal growth sessions than females, even when extra credit in their class was offered. Eighty eight males initially expressed interest by completing the contact sheet and informed consent during the classroom recruitment, however only twenty nine or 33 percent actually participated and completed the project in contrast to 42 percent of females. Peer pressure may have led students to sign up for the project in the presence of their instructor and classmates but to decline when individually contacted. Regardless of influences on participation and completion, males consistently produced results

indicating that gender is a significant individual difference in predicting face-to-face or computer-mediated success.

Hypothesis IV: The hypothesis that there is no interaction between ethnicity and efficacy in either condition could not be disproved in this study design although the relatively literature on multi cultural counseling suggests that race and ethnicity are important enough issues to warrant further research with a different design or different process and outcome measures.

Hypothesis V: The hypothesis that learning style differentially affects efficacy in counseling in general and between face-to-face and computer-mediated counseling was supported for prediction of future use of computer-mediated mental health services.

Hypothesis VI: The hypothesis that there is no interaction between personality attitude (introversion/extraversion) and efficacy in either condition could not be disproved in this study design although the qualitative evidence in the relevant literature suggests that this variable is important enough to warrant further research with a different design or different process and outcome measures

#### Limitations.

The major limitations of the study were the age and subculture homogeneity of the participant population, and the acuity of the dependent variables. The participants were young adults living in a rich, mobile cultural environment of college campuses. The counseling and guidance resources were multiple and readily available (Counseling Center, Infirmary, Student Services, Resident Advisors, Activities Advisors, Coaches, Professors, and such) whereas Internet counseling is seen as most applicable to those with limited resources and access to mental health care. While this study did provide some significant results with the population involved, additional research is needed with

clinical populations, and geographically or situationally remote populations who have greater dependence on telecommunication for health care.

In retrospect, a survey measure should have been developed to appraise the participants' current Internet usage. Areas to be assessed would include type of Internet provider service (IPS), number and names of listserv membership, number and name of use group memberships, frequency of chat room use, frequency of bulletin board use, number and nature of (personal, vendors, business) email use, knowledge about and use of search engines. It is an adage of social psychology that the best predictor of future behavior is current behavior, therefore it would be instructive to see how the participants are currently using the Internet rather than or in addition to asking them to predict future use of Internet counseling, as was done in the outcome satisfaction questionnaire. It is assumed that the computer and Internet competence of this sample population is probably greater than that of the general American population and population of potential clients.

Brief therapy and 50-minute therapy sessions have been demonstrated to be effective in face-to-face counseling. However, these time frames may or may not be equally effective in Internet counseling because speaking is generally accomplished faster than typing. If a person has difficulty producing speech, it is probably part of the problem for that he or she is seeking help. The same is not true if a person has difficulty typing quickly, concisely and/or correctly. Dial up ISPs have an annoying habit of disconnecting that steals precious time from a session. In this study, the time frame was held constant for the two conditions. This may have compromised the effectiveness of the Internet condition.



### Implications and Recommendations

#### Research

The obvious implication of this study is that computer-mediated counseling is a viable mode for providing mental health services, and in some dimensions surpasses face-to-face counseling in effectiveness. Furthermore, there is preliminary evidence that there are significant individual differences that need to be explored to determine who is most likely to benefit from computer-mediated counseling and who should be referred to face-to-face counseling. The suitability of a potential client and the appropriateness of computer-mediated

With research-based information, including results in this study, screening procedures can be developed that consider not just the presented problem but also the characteristics of the client who is seeking computer-mediated mental health services. When potential clients have a choice of service modalities, one size does not fit all. Isolated clients, however, may not have a choice of services. For these clients, the therapist's awareness of individual differences can be used to maximize the effectiveness of computer-mediated counseling even when in the best of all possible situations, face-to-face counseling may have been ideal.

This study addressed only individual counseling. Research must be designed and conducted to evaluate the potential for Internet group therapy, that actually appears to be the most prevalent format in current usage.

The issues presented in the personal growth sessions conducted for this study were valid and legitimate concerns and most students felt that they genuinely benefited from the experience even when their original motive was extra credit, rapport with the classroom instructor, or altruistic desire to help and be a part of research. The nature of

these issues did lead to referral to formal University or College counseling resources. Nonetheless, persons motivated to locate and pay for Internet counseling will presumably be experiencing more serious problems, have fewer personal coping resources, and/or a greater perceived need for services. The results of this study may or may not generalize to the population most likely to use Internet services. Further study must incorporate this population. A study of a clinical population could use any of a number of more objective, statistically validated outcome measures discussed in chapter 2 of this paper.

### Clinical

College students were willing to discuss serious personal growth issues over the Internet with a facilitator they had never met. They had certain assurances, to be sure, including but not limited to a copy of the Institutional Review Board contact phone number and email address. They met with the principal researcher in person when she recruited in their classroom. They had access to the department and the dissertation committee chairperson through their classroom instructor. They were advised of the specific campus resources available to them as students, should their issues require crises, counseling, psychological or psychiatric intervention. People without these immediate and serious recourses also seem to be willing to disclose private intimate information over the Internet. Given the number of counseling web site that exist, clinicians must provide protection for vulnerable clients and must also consider ways to protect their own professional integrity. Students did not ask if the project was safe and approved by the University, they were given specific documentation that described their responsibilities, protection, resources, and recourses. The Web counselor should be expected to provide the same information to potential clients.

This research indicates that gender and academic learning style affects the efficacy of counseling. Web clinicians should consider incorporating this information into suitable screening procedure. There are certainly more critical issues to be included in screening such as emergency access phone numbers, medication (as an indicator of seriousness and 'doctor' shopping), however it should be disclosed to males seeking Internet counseling that "research suggests that" they might have better results with face-to-face counseling if that is an option for them. Males should certainly not be excluded from computer-mediated counseling on the bases of this research.

Academic learning style is likely to be a factor that pre-selects those who seeking Internet counseling since it was found to be significant in measures of predicted future use and computer comfort and skill.

Because computer-mediated counseling is often suggested as particularly applicable for persons with disabilities, follow up research should be designed to compare keyboarded computer-mediated counseling and voice activated computer-mediated counseling. Even persons with disabilities who are not currently using voice activate computer access might be encouraged to do so if research bears out its benefit. Personal voice activate software has become cheaper than one traditional therapy session and might be provided by a third party payer in a 'medical needs' situation.

The code of ethics of Certified Rehabilitation Counseling (2002) is being revised and extended to include "Electronic Communication and Emerging Applications," section I addressing communication and the counseling relationship. The results of this research indicated that section 12-B h. Inappropriate Use should be expanded to include some recognition that individual differences may be include in this category as well as

'presenting problems' already include in this article of the code. The NBCC (2001) ethics for the practice of Internet counseling includes a section entitled Internet Counseling Relationship which offered direction for dealing with suspected 'imposter' clients and minors. The board should consider adding a item in this section about individual differences, known and yet to be identified.

Internet counseling exists. As the professional associations struggle with developing working papers and preliminary ethical guidelines, the research community can provide the data needed to advise these decisions. Clinicians must practice well and ethically to set the tone and expectations for this new frontier in mental health service.

This study begins to explore the personal characteristics that can be used in potential screening for appropriateness of Internet services for a given client or population of clients, or in the absence of clear cut reasons to pre screen, can be used to advise the therapist to insure that the differential potentials are considered. The core issues remain to be investigated more thoroughly – efficacy of Internet counseling, format and restrictions to maximize efficacy, and individual differences of potential uses that can enhance or limit outcome results and satisfaction.

APPENDIX A  
FORMS AND INSTRUMENTS

**Research Participant Information Sheet**

This information is strictly confidential and will be used only for purposes of this study including contacting the participant to schedule sessions, allow reporting to instructors for purposes of class credit where it is offered, demographics of study, and such.

Date:

Name:

E-mail Address:

Local Phone number:

Age:

Gender:

Race(s):

Level \_\_\_\_\_ freshman \_\_\_\_\_ sophomore \_\_\_\_\_ junior \_\_\_\_\_ senior

Major:

Instructor:

Class:

Best day of week to schedule study sessions: \_\_\_\_\_ M \_\_\_\_\_ TU \_\_\_\_\_ W \_\_\_\_\_ TH \_\_\_\_\_ F

Best time of day \_\_\_\_\_ morning \_\_\_\_\_ afternoon \_\_\_\_\_ evening

Disability accommodations needed (specify) Contact Information Sheet with demographic information

**Informed Consent**

**Project Title:** Process and Outcome efficacy of 21<sup>st</sup> Century Counseling Techniques

**Please read this consent document carefully before you decide to participate in this study**

**Purpose of the research study:**

The purpose of this doctoral dissertation study is to compare how students feel about his or her experience of personal growth sessions dealing with common issues faced by young adults.

**What you will be asked to do in the study:**

You will be asked to talk about issues that concern you such as adjustment to college life, relationship with room mate, adjustment to study demands, time management, stress management and such. You will be asked to participate in three one-hour sessions with a research assistant. You will be randomly assigned to participate in these three personal growth sessions in person or via computer. That is, you will either be assigned to three computer sessions or three face-to-face sessions. You will be working with one person, a graduate student in counseling for all three sessions. The graduate counseling student will not be the primary investigator. After the 3<sup>rd</sup> session you will be asked to complete five (5) pencil and paper surveys so the last session will require one hour for your personal discussion and one hour to complete the surveys.

**Time required:**

4 hours

**Risks and benefits:**

You will receive three hours of individual personal growth guidance in working with a personal growth issue of concern to you. You may become distressed and decide that you need counseling that is available to you at the University Counseling Center.

**Compensation:**

You may receive extra credit in the course from that you were recruited if the professor offers it. If this credit is available, it will be no more than 2% of the course point value. The investigator has no control over the awarding of points. If the professor offers points, you will receive them whether you complete the study or not.

**Confidentiality:**

Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be kept in a locked file in my faculty supervisor's office. When this study is completed and the data have been analyzed, the list will be destroyed. Your name will not be used in any report. Your professor will be provided with a list of students who volunteered if you are to receive credit but he/she will not receive any information about your participation nor whether you completed the study. If you are assigned to the computer-mediated condition, you will be working on a secure (log-on, password, and firewall encryptions) web site, however there is a small chance that it could be

compromised. The study results will be published as a dissertation and available in the University of Florida George A. Smathers Library after it has been completed.

**Voluntary participation:**

Your participation in this study is completely voluntary. There is no penalty for not participating. There is no penalty for deciding to withdraw from the study at any time.

**Right to withdraw from the study:**

You have the right to withdraw from the study at any time without consequence.

**Whom to contact if you have questions about the study**

Martha L. Groble, graduate student, Department of Counselor Education  
[Martye@att.net](mailto:Martye@att.net)  
(904) 387-2617

James Archer Jr, PhD, College of Education, Department of Counselor Education  
[Jarcher@coe.ufl.edu](mailto:Jarcher@coe.ufl.edu)  
(352) 392-0732 extension 231

**Whom to contact about your rights as a research participant in this study:**

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250  
(352) 392-0433

**Agreement:**

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant: \_\_\_\_\_

Date: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

Date: \_\_\_\_\_

Outcome Satisfaction Questionnaire (participant form)

NB: This instrument was administered online in the WebCT survey function using an Software application, Respondus, so the participant view varied from this. They marked their responses by clicking in the appropriate radio button or text box, not depicted below.

**Question 1** The skills, abilities, and experiences that I learned directly enabled me to reach the personal growth goal I set for these sessions.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 2** Being able to apply the skills, abilities, and experiences I gained in these sessions to resolve other stresses and concerns in my life.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 3** The amount of information my facilitator gave me about my particular stress, concern, or problem.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 4** The amount of information my facilitator gave me about my mental wellness practice.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 5** The relief from the stress or concern that these sessions provided.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 6** Overall rating of my facilitator.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 7** Overall rating of my personal growth session

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 8** How would you rate your computer skills (e.g., keyboarding, word processing) and comfort?

Computer guru    good user skills    adequate user skills    novice skills    computer phobic



**Question 9** How would you rate your Internet skills?

Internet guru    good user skills    adequate user skills    novice skills    Internet phobic

**Question 10** Please tell us what you liked least about this experience.

**Question 11** Do you have observations, reflections or comments, that have not been addressed in these surveys, that you wish to share about being part of this study?

**Question 12** How likely are you to choose computer mediated counseling should you choose counseling at some time in the future?

Very likely                  likely                  not likely                  would not                  not sure

### Outcome Satisfaction Questionnaire (facilitator form)

NB: This instrument was administered online in the WebCT survey function using an application, Respondus, so the facilitator view varied from this. They marked their responses by clicking in the appropriate radio button or text box, not depicted below. The participant link was labeled Outcome Satisfaction Questionnaire but the facilitator link was labeled Facilitator Survey 1 because all surveys were listed on the same screen. It was a concern that the participants might try to second guess their facilitators rather than offer their own frank opinions, if they knew they were completing similar surveys. The same convention was used with the Working Alliance Inventory label for participants and Facilitator Survey 2 label for facilitators.

**Question 1** participant ID and facilitator initials

**Question 2** The skills, abilities, and experiences that this participant learned directly enabled him or her to reach the personal growth goal set for these sessions.

extremely satisfied    very satisfied    satisfied    not very satisfied    not at all satisfied

**Question 3** Participant being able to apply the skills, abilities and experiences gained in these sessions to resolve other stresses and concerns in life.

extremely satisfied   very satisfied   satisfied   not very satisfied   not at all satisfied

**Question 4** The amount of information I gave this participant about his/her particular stress, concern or problem.

extremely satisfied   very satisfied   satisfied   not very satisfied   not at all satisfied

**Question 5** The amount of information I gave this participant about mental wellness practice.

extremely satisfied   very satisfied   satisfied   not very satisfied   not at all satisfied

**Question 6** The relief from the stress or concern that these sessions provided this participant.

extremely satisfied   very satisfied   satisfied   not very satisfied   not at all satisfied

**Question 7** Overall rating estimate of this participant's reaction to me.

extremely satisfied   very satisfied   satisfied   not very satisfied   not at all satisfied

**Question 8** Overall rating estimate this participant's growth sessions

extremely satisfied   very satisfied   satisfied   not very satisfied   not at all satisfied

APPENDIX B  
FACILITATOR TRAINING MANUAL

Table of Contents

1. Logistics
2. Procedure section of dissertation proposal with protocol for each session
3. Record forms
4. WebCT access information with copy of each screen from http to chat room
5. Brief Cognitive Behavior therapy material from Meichenbaum
6. Computer Counseling Technique (articles listed in required reading)
7. College Student Personal Growth Issues (articles listed in required reading)

**Front pocket**

Treatment plan forms

Progress notes forms

**Back pocket**

Facilitator checklist

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●  
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(your local all-purpose helper)

James Archer Jr. [Jarcher@coe.ufl.edu](mailto:Jarcher@coe.ufl.edu)  
(dissertation committee chairman)

## Logistics

### **Recruiting Participants:**

Researcher contacts instructors of undergraduate classes and get permission to recruit in their classes. Researcher recruits in classes giving brief description and having volunteers fill out a contact sheet and a signed consent. The volunteer is also given a copy of the informed consent.

### **Scheduling Participants:**

Researcher or trained assistant will randomly assign the participant to one condition or the other. XXX will assign the code (to keep things simple since he has already begun facilitating). The code takes the form of two or three letters (the initials of the classroom instructor), four digits (unique ID), and two letters (facilitator's initials). Therefore, LMCxxxxDP is a student in Laura's class with Dan for a facilitator. Use the code not the participants' name on all paperwork and tapes. Once you have the contact sheet, contact your participant and arrange a mutually agreed upon time to meet. Be prompt or early. Record all contact and results on your tracking sheet (especially answering machine messages and no shows).

FACE to FACE CONDITION The facilitator will contact the counselor education office to schedule a room for the face-to-face session. The facilitator will meet the participant outside the lab area, introduce him or herself and lead the participant to the assigned room (rooms will change with each appointment due to availability). Be sure you have gotten the key from the office, unlocked the room and checked for furniture placement and cleanliness before the participant arrives. These sessions are to be taped to keep the conditions equal and to evaluate adherence to protocol. Tapes will be provided. Let me

know what size you need for your recorder. If you do not have a recorder, one will be provided for the duration of the experiment. Session should last 50-60 minutes. If the session is shorter or longer than the norm, please make a note why. It is fine; I just need to know why. Tapes, clocks, tissue, manila envelopes and any new handouts will be in the team mailbox so please check it regularly. If you leave materials be sure they are in sealed envelopes for privacy,

COMPUTER-MEDIATED CONDITION Entering your participant into the WebCT system is a two part process. Each participant has the last name Participant, and the first name alphanumeric code – because these show up in the chat room. Do not use the participant's name. Use the code for the password to keep things simple and private. Use the code plus the numeral 1 to create a second account where you can complete the facilitator surveys for this participant (Your regular access level is TA and as such you can see but not do the surveys). WebCT automatically stores all dialogues so this privacy is paramount. If your participant already has a Global ID from another class, he or she must not use it for this study because it would be recorded.

The chat room format in WebCT is designed for class access, not individual access therefore a participant might enter your session. Please be very assertive in asking them to leave and return at their scheduled time. Checking the chime entry box will help you notice if someone does accidentally enter. I do not anticipate this being a problem but be aware it could occur and be prepared to handle it. If two facilitators have scheduled a chat room for the same time, one should move to any empty chat room 1-4. Please do not use 5 or 6 with participants except as noted below.

I will work with each facilitator to insure that you are comfortable using WebCT, working to the session room and helping your participants get there as well ([Martye@att.net](mailto:Martye@att.net)). You can always get help from the university help desk 392-help for login problems. Be sure you have these worked out for yourself and for your participant before your first scheduled personal growth session. For big problems, Doug Johnson is a very user-friendly administrator of WebCT and you can reach him through the CIRCA help desk. Be sure to mention that project you are with when you leave him a voice message.

We are only using rooms 1 through 4 for participants, however I would like to schedule facilitator meetings with me in the general chat for dissertation room and you may use the General Chat for all rooms to consult with one another (but not with participants). The assessment tech will wait in room 5 during CMC administrations to answer any question or help the participant.

### STUDY MEASURES

The facilitator fills out two measures at the end of the third session. The participant will fill out four measures at the end of that session. Administration will be conducted by Loren so please give him your schedule of the last sessions so he can be present at the proper time to conduct the assessments.

### TAPES AND RECORDS

When you have completed the entire process with a participant return tapes, treatment plans, contact sheets, progress notes, and so forth to me. Turn in tracking sheets by email weekly so we can keep track.

### Session Structure Guidelines

#### Condition 1 Face-to-face

Session 1 Face-to-Face: 60 minutes

Goals: To engage the participant in collaborative, cognitive personal growth counseling

Objectives:   To develop rapport with the participant  
                   To clarify the therapy process to be used  
                   To identify and clarify the participants issue-based goal  
                   To collaboratively develop a set of tasks to accomplish the goal

Session 1: The facilitator will welcome the participant and answer any questions.

The purpose of the first meeting is to begin to establish a bond between the facilitator and the participant, explain the nature, language and methods of the CBT sessions, identify the goals and tasks to be accomplished and make the next appointment. For face-to-face sessions this means discussing therapy conventions of freeze frame, stop action, focus on here and now, and other as listed in the training manual. For the computer-mediated sessions, the focus on here and now, cognitive reframing and homework are similar to the face-to-face session, however the subtle therapeutic interventions will differ in that rather than non verbal vocalizations, facial expression, body language and visual/spatial environment the action literally in the face-to-face session, the research assistant will teach and use bracketed emotions, descriptive immediacy, and textual visualization. The participant will need to practice these with the research assistant prior to the experiment until he is comfortable and confident using them.

Session 2 Face-to-Face: 60 minutes

Goals: To continue to build rapport and to process work to date

Objectives:   To continue to develop rapport with the participant  
                   To review independent participant work to date  
                   To process experiences relevant to tasks and goals since last session

To collaboratively revise, enhance, or focus the set of tasks to accomplish the goal

Session 2: The facilitator will welcome the participant, ask about the homework and tasks completed during the past two weeks since the first session, review work accomplished and work not accomplished. Review the goal and tasks to accomplish that goal. Discuss progress and obstacles to success. Plan tasks for next two weeks.

#### Session 3a Face-to-face

Goals: To review work of three sessions and bring about satisfactory closure

Objectives: To continue to develop rapport with the participant  
 To review independent participant work to date  
 To process experiences relevant to task and goal since last session  
 To highlight gains made during therapy  
 To plan ongoing self help tasks  
 To bring about satisfactory closure and make referral is necessary.

Session 3a: The facilitator will welcome the participant and work through closure and termination activities with participant, review progress, homework accomplished and not, and plan for the participant's further self help.

#### Session 3b Face-to-face

Goals: To evaluate the working alliance, outcome satisfaction and individual differences of the participants.

Objectives: To continue to develop rapport with the participant  
 To administer the evaluation instruments  
 To thank the students for their participation

Session 3b: The facilitator escorts the participant to the computer lab, helps them log on, make sure the tech is in the help chat room, and give the student the laminated cards to help with the session. The facilitator will complete the WAI – T, his or her assessment of the therapeutic relationship.

Computer-mediated Sessions are similar with the following exceptions



### Session 1 Computer-mediated

Goals: To engage the participant in collaborative, cognitive personal growth session

Objectives:   To develop rapport with the participant  
                  To clarify the therapy process to be used  
                  To teach text-talk non verbal techniques  
                  To identify and clarify the participants issue-based goal  
                  To collaboratively develop a set of tasks to accomplish the goal

### Session 3b Computer-mediated

                  To continue to develop rapport with the participant  
                  To guide the participant to the survey section of WebCT and verify that  
                  the tech is in the help chat room  
                  To thank the students for their participation

Therapy Plan and Progress Notes**Plan****Participant ID:****Counselor ID:****Date:****Condition:**

Presenting Issues(s):

Participant Strengths:

Resources:

Goal(s):

Ways to reach goal:

Session 2 and 3

Participant ID

Facilitator ID

Condition

Progress Notes (date each entry)

Facilitator Checklist

Participant ID	Facilitator initials	Instructor
----------------	----------------------	------------

1. \_\_\_\_\_ get contact sheet that has been coded and assigned to a condition
2. \_\_\_\_\_ contact participant and set up first appointment
3. \_\_\_\_\_ contact department secretary to reserve a room for F2F sessions

**OR**

- \_\_\_\_\_ contact the participant and instruct on the WebCT log-on procedure  
prior to the first CMC session
4. \_\_\_\_\_ check tape and recorder for F2F condition, call helper if you need either at 355-0118
  5. \_\_\_\_\_ conduct session
  6. \_\_\_\_\_ schedule next session
  7. \_\_\_\_\_ repeat 2 through 6 above
  8. \_\_\_\_\_ contact and schedule assessment tech to be present in person or on-line during assessments
  9. \_\_\_\_\_ conduct final session
  10. \_\_\_\_\_ introduce participant to assessment process and tech
  11. \_\_\_\_\_ complete the WAI (t) and the OSQ (f) for this set of sessions
  12. \_\_\_\_\_ put all three tapes, treatment plans and progress notes in manila envelope, label with the participant's code in the top left corner and put in team box or contact helper for pick up

Sample of tracking sheet

Tracking record of all volunteers regardless of degree of completion. This record is meant to account for each volunteer. Fill in the code ID for each volunteer whether they actually participate or not. Indicate F2F or CMC under condition. Put a check mark under each session completed. Use the note column to mention anything usually (eg. The woman who never intended to participate). We need each record so we can determine drop out rate and such.

Participant	Facilitator	Contacted	Scheduled	# sessions complete	# Participant surveys complete	Nbr Facilitator surveys complete	Notes, comments
LMC0001	Dan	x					
LMC0002	Dan	x	X		3	4	2 finished
LMC0003	Dan	x					
LMC0004	Dan	x	X		3	4	2 finished
LMC0005	Dan	x	X		3	4	2 finished
LMC0006	Dan	x					
LMC0007	Dan	x	X		3	4	2 finished
LMC0008	Dan	x	X		3	4	2 finished
LMC0009	Dan	x					
LMC0010	Dan	x	X		3	4	2 finished
LMC0011	Dan	x	X		3	4	2 finished
LMC0012	Dan	x					
LMC0013	Dan	x	X		1		scheduled
LMC0014	Dan	x	X		3	4	2 finished
LMC0015	Dan	x	X		3	4	2 finished
LMC0016	Dan	x	X		3	4	2 finished
LMC0017	Dan	x	X		3	4	2 finished
LMC0018	Dan	x	X		3	4	2 finished
LMC0019	Dan	x	X		3	4	2 finished
LMC0020	Dan	x					
LMC0021	Dan	x	X		3	4	2 finished
LMC0022	Dan	x					
LMC0023	Dan	x					dropped
LMC0024	Dan	x					
LMC0025	Dan	x	X		3	4	2 finished

Sample Screen Shot training pages

## WebCT Samples Screens

**Checking your participants survey status.** With TA level WEBCT access you can check the status of your participants and know who has completed their surveys and who has not. You must do this one survey at a time. . To get to this screen click on the opinions icon on the first page of the study site. You will see something like screen shot 1 below. You cannot bring up the surveys here because as you can see they are not “hot links”. However you can see two hot links – blue or purple with underlines. The date and availability are also blue but I think that is just to make them easy to find. The “live” links are the ones with underlines. By clicking on a “submissions link” you will see a screen like the one captured in screen shot 2 below. The “detail link” is illustrated in screen shot 3. On the right you have some options (second set ) to help you find what you want without flipping through all the next and previous buttons.

Screen Shot 1 First page of survey section

**WebCT**  
Dissertation Research Study  
Home » opinions

**Quiz and Survey Management**  
Please be sure that you are using INTERNET EXPLORER 5.5 because WebCT and Netscape conflict. If you are not using the Internet Explorer browser, exit and change to the IE browser. AOL also is not supported by WebCT, however you can access Internet Explorer from AOL. There are 4 surveys we are asking you to complete. Please answer each question in each survey. Your answers are anonymous. There are no right or wrong answers. A number of the research team is in the Universal chat room for dissertation research only however if this does not work for the other general chat room. If you have any questions, problems, or comments, go to the home page, then click on the Personal Growth Section it on twice (two screens) to go to the chat room section. Thank you for your participation in this project.

Current Date: Apr 23, 2002 10:01

Title	Availability	Duration	Status	Results
Dissertation study survey only, please complete all				
ASST	From: February 01, 2002 01:00 To: Unlimited	--	Unstarted	<a href="#">Submissions</a> <a href="#">Detail</a>
Learning Style Inventory	From: February 01, 2002 01:00 To: Unlimited	--	Unstarted	<a href="#">Submissions</a> <a href="#">Detail</a>
Writing Abilities Inventory - Postgrad Form	From: February 01, 2002 01:00 To: Unlimited	--	Unstarted	<a href="#">Submissions</a> <a href="#">Detail</a>
Creative self-efficacy	From: February 02, 2002 01:00 To: Unlimited	--	Unstarted	<a href="#">Submissions</a> <a href="#">Detail</a>
Facilitator surveys				
Facilitator Survey 1	From: March 30, 2002 05:00 To: Unlimited	--	Unstarted	<a href="#">Submissions</a> <a href="#">Detail</a>

**Screen Shot 2** Submission option from previous screen shot. Note the blue highlighted next page button -- that means there are more pages with lists. Once you go past page 1 the previous page box will also be “live” – blue lighted, blue

**WEBCT**  
Dissertation Research Study  
Home » My Home » Submissions

**Submissions: MBTI**  
[Submitting] [Detail]

Page: 1 [for0030m participant] [Previous page] [Next page]

User ID	Name	Completed
ds0030m	Participant: ds0030m	No
ds0030m0011dp	Facilitator: ds0030m0011dp	No
ds0030m0027dp	Facilitator: ds0030m0027dp	No
ds0030m007dp	Facilitator: ds0030m007dp	No
ds0030m016dp	Facilitator: ds0030m016dp	No
ds0030m	Participant: ds0030m participant	No
ds0030m01	Participant: ds0030m participant	No
ds0030m01ka	Participant: ds0030m participant	No
ds0030m03ka	Participant: ds0030m participant	No
ds0030m04ka	Participant: ds0030m participant	Yes
ds0030m05ka	Participant: ds0030m participant	Yes
ds0030m06ka	Participant: ds0030m participant	Yes
ds0030m07ka	Participant: ds0030m participant	No
ds0030m08ka	Participant: ds0030m participant	No

**Options**  
Select student's order as you wish, and click Update  
☐ Reset  
☐ Set page size to 15  
[Update]

**Screen shot 3** Using the detail hot link you can see the participants actual responses. I sincerely request that you not do this for the participant's privacy and confidentiality.

There is no way I can block this option in WEBCT so I am trusting each of you to respect the participant's privacy.

These articles must be read prior to beginning work on this project so that we are all working from a common body of information. You may borrow the researcher's copies. All articles are available in the Education Library, Library West, the Health Science Library, on the Internet, or are included (\*) in your manual. You are also welcome to read the entire dissertation proposal but that is certainly not required or necessary. You may download the WebCT manual from <http://www.webct.ufl.edu> but this is not necessary and it contains a great deal of information you do not need.

Colon, Y. (1994). *Chatter(er)ing through the fingertips: Doing group therapy*. Internet [web document]. Women and Performance Retrieved 2/15, 2001, from the World Wide Web: <http://www.echonvc.com/~somen/Issue17/public-colon.html>.

\*Meichenbaum, D. (1988). Cognitive-behavior modification workshop. Boston, MA: Harvard Medical School--Massachusetts General Hospital.

Meichenbaum, D. (2000). Treatment of individuals with anger-control problems and aggressive behaviors: A clinical handbook. Clearwater, FL: Institute Press.

Murphy, L. J., & Mitchell, D. L. (1998). When writing helps to heal: E-mail as therapy. British Journal of Guidance & Counseling, 26 (1), 21-32.

\*Rinaldi, A. H. (1998). The Net: User Guidelines and Netiquette. Florida Atlantic University (web document). Retrieved 07/14 2001, from the World Wide Web: <http://www.fau.edu/netiquette>

\*Suler, J. (1997). Text-talk: Psychological dynamics of online synchronous conversations in text-driven chat environments. Rider University(web document). Retrieved 02/10 2001, from the World Wide Web: <http://www.rider.edu/users/sule/pscyber/texttalk.html>.

\*Z'Boray, D. (1997). The UnOfficial Smiley FAQ: author (web document). Retrieved 09/06 2001, from the World Wide Web: <http://www.newbie.net>

#### Required Reading College Student Counseling

Archer Jr., J. & Cooper, S. (1998). Counseling and mental health services on campus. San Francisco, Jossey-Bass Publishers.

Cooper, S. & Archer Jr., J. (1999). Brief therapy in college counseling and mental health. Journal of American College Health, 48 (July), 21-28.

Murphy, M. C. & Archer Jr., J. (1996) Stressors on the college campus: A comparison of 1985 and 1993. Journal of College Student Development, 37 (1), 20-28.

Steenbarger, B. N. (1992). "Intentionalizing brief college student psychotherapy." Journal of College Student Psychotherapy, 7 (2), 476.

Wilson, S. B. (1978). Cognitive intervention in the normal developmental problems of young adults. Journal of College Student Personnel, 29 (March), 136-140



## APPENDIX C COMPUTER-MEDIATED SESSION TRANSCRIPT

This is a transcript of a computer-mediated session recorded by the WebCT system and downloaded to the researcher's computer. Only the researcher had the level of access required to see and download these logs. The only editing removed the participant's identification code and the facilitator's name. All spelling and grammar remains as produced. Samples of the facilitator's use of Internet counseling techniques emotion bracketing and textual visualization, described in Chapter 2, are highlighted in gray. Also noted in gray is the facilitator's explanation of the limits of confidentiality and the facilitator's amplification of the participant's use of the emoticon "lol". Lol is one of the most common emoticons used on the Internet but it is an acronym with multiple meanings - laughing out loud, lots of love, and lots of luck therefore it was important for the facilitator to find the precise meaning the participant intended.

\*^\*\*\*\*\*  
\*\*\*\*\*

New session has begun in EDU DISS\_Room1.

Time: Mon May 20 17:02:27 2002

\*^\*\*\*\*\*  
\*\*\*\*\*

\*+\*\*\*\* --FACILITATOR entered EDU DISS\_Room1. Time: Mon May 20 17:02:27 2002

FACILITATOR>>This is Session one again for

\*+\*\*\*\* --PARTICIPANT entered EDU DISS\_Room1. Time: Mon May 20 17:16:14 2002

PARTICIPANT>>sorry I got lost

FACILITATOR>>Hello, I just wrote you an email!

FACILITATOR>>

FACILITATOR>>Was it hard to get in?

PARTICIPANT>>yes.. well I did not click on the dissertation link

PARTICIPANT>>at first

FACILITATOR>>oh, no, that can get real messy

FACILITATOR>>Everything works fine until it doesn't (wry smile)

PARTICIPANT>>lol

FACILITATOR>>How are you doing?

PARTICIPANT>>fine

PARTICIPANT>>and u?

FACILITATOR>>good. I have had a crazy morning, I work part time in Shands psychiatry, and I showed up for 2:30 for the group, but it was at 1:00!

FACILITATOR>>So I missed it all (sigh)!

PARTICIPANT>>Sorry to hear that... I hate those kind of days

FACILITATOR>>yeah

FACILITATOR>>what about yours? Did you have class today?

PARTICIPANT>>yes, I enjoy my classes they are pretty easy going right now

FACILITATOR>>have you taken any Internet?

PARTICIPANT>>never

FACILITATOR>>so you are fresh! (gleefully wringing hands) What we could do to you!

FACILITATOR>>(ironic, joking of course)

PARTICIPANT>>lol

FACILITATOR>>So, I want to explain a little bit about what this is going to be like. Is that cool?

PARTICIPANT>>yes

FACILITATOR>>I will spend about 5-10 minutes explaining a couple things, then we can talk about the "meat", and then in the end we will try to come up with a "plan" or homework for you to do until the next time I see you

PARTICIPANT>>okay

FACILITATOR>>The next two sessions will be pretty much the same, except hopefully (smile) I won't have to spend that time in the beginning explaining

PARTICIPANT>>okay

FACILITATOR>>About halfway through the third session, we will finish up and then I will guide you to the quizzes that you take at the end, there are 4.

FACILITATOR>>Any questions so far?

PARTICIPANT>>nope :-)

FACILITATOR>>Ok, then . . .

FACILITATOR>>the first thing I want to talk to you about is confidentiality. Basically, what is said (actually, written) here is confidential, except that Martye (the one who's doing this for her dissertation) will have access to it

FACILITATOR>>but . . . there are some exceptions to that confidentiality . . .

PARTICIPANT>>what are they

FACILITATOR>>that is if I think you are in danger to yourself or others, or if I suspect child abuse, elder abuse, or abuse of individuals w/ disabilities. In that case, I would have to report it to the proper authorities. But, don't worry, I would never do that without first talking to you about it first

FACILITATOR>>Other than that, what is said here, stays here. Make sense so far?

PARTICIPANT>>yes

FACILITATOR>>cool (smile)

FACILITATOR>>the only other thing I wanted to say a little about is . . .

FACILITATOR>>that counseling is a little different than other relationships inasmuch as it is all about you

PARTICIPANT>>ok

FACILITATOR>>you are free to ask me questions if you want, even if it is personal, but I will always hesitate to answer to make sure that the conversation doesn't change to focus on me, cause that's not the point

PARTICIPANT>>ok

FACILITATOR>>and that also, you are really doing the counseling, all day everyday, and the sessions themselves are more like checkups or coaching sessions

FACILITATOR>>ok, whew! After all that, any q's?

PARTICIPANT>>ok

PARTICIPANT>>no

FACILITATOR>>then . .

FACILITATOR>>tell me what we are here to tak about

FACILITATOR>>talk (oops!)

PARTICIPANT>>what area are you mostly concerned

FACILITATOR>>what do you mean? What area am I mostly concerned with?  
let me turn the question around --what area are you mostly concerned with?

PARTICIPANT>>personal relationship

PARTICIPANT>>relationships

FACILITATOR>>with a friend? boyfriend? tell me more

FACILITATOR>>(hey, by the way, if i interrupt, don't worry (just keep going) (smile))

PARTICIPANT>>boyfriend, I have this fear of commitment and I know where it came from but I just don't know how to get rid of it. I always question behind a guys motives for telling me his feelings even if we are dating (like movie and dinner)

FACILITATOR>>are you dating someone now?

PARTICIPANT>>several

PARTICIPANT>>I am scared to limit myself to one person

FACILITATOR>>wowee!

PARTICIPANT>>lol

FACILITATOR>>oh, I see, so you think that's why you are dating several at a time

PARTICIPANT>>yes

FACILITATOR>>how many are we talking here?

PARTICIPANT>>three

PARTICIPANT>>they are nice guys\

FACILITATOR>>so, you are dating three guys because you are afraid to limit yourself to just one. Before we go farther, let me ask -- do you like all of them?

PARTICIPANT>>good question lol

FACILITATOR>>that symbol lol, what does you mean by it right there?

PARTICIPANT>>one is an ex, one likes me a heck of a lot more than I like him, and the other I could see myself with if I could get pass this "situation"

FACILITATOR>>I see

PARTICIPANT>>laughing out loud

FACILITATOR>>ok, good

FACILITATOR>>I wasn't sure

FACILITATOR>>ok, so one is an ex, but now are you still kinda dating him?

FACILITATOR>>or is it totally over?

PARTICIPANT>>no

PARTICIPANT>>he caused this fear

FACILITATOR>>ooh. So right now you are only dating two

PARTICIPANT>>yeah... I guess so

FACILITATOR>>wait, wait, wait (now I am the one laughing out loud!)  
what do you mean I guess so?

PARTICIPANT>>Well, the ex is.... I don't want him back. I keep him around for comfort

PARTICIPANT>>do you get what I mean

FACILITATOR>>I am getting the idea--but not total just quite yet . .

FACILITATOR>>you still mess around with him? or . . you still call him on the phone . . or? (inquisitive look on my face)

PARTICIPANT>>straight to the point..... we mess around when I say so... comfort! You get me now?

FACILITATOR>>got it

FACILITATOR>>ok, and the other one, he likes you a lot more than you like him

FACILITATOR>>and then the third . . .ok, we got it.

PARTICIPANT>>:-)

FACILITATOR>>so, you said that your ex made you this way, and that you think you know why. tell me what happened

PARTICIPANT>>well....

PARTICIPANT>>we were together for a year and a half

PARTICIPANT>>and I told him eight months into the relationship that I loved him

FACILITATOR>>and you meant it, or you just told him?

PARTICIPANT>>I meant it... he waited longer to say the same becuz he said that he did not take that word lightly

PARTICIPANT>>i meant it

FACILITATOR>>and, I am guessing something happened, right?

PARTICIPANT>>yes

PARTICIPANT>>we started going through problems. he was taker and I was always the giver.

FACILITATOR>>did he ever return the words?

PARTICIPANT>>I felt like he did not appreciate me.yes, he said he loved me

FACILITATOR>>and when it broke off, who broke it off, you? I am guessing, if you still keep him around?

PARTICIPANT>>After about three months of going through arguements off and on

PARTICIPANT>>I did broke it off because he told me one night during a conversation that he did not love me nor did he know if he meant it the first time. We were just having a conversation

FACILITATOR>>oh man

PARTICIPANT>>break it off

FACILITATOR>>it hurt really bad, right?

PARTICIPANT>>something in me change from that night. I never cried so hard in my life.

PARTICIPANT>>it still hurts

FACILITATOR>>yeah

PARTICIPANT>>I don't want that feeling ever again.

FACILITATOR>>did you all break it off then, or did you kinda hang on for a while?

PARTICIPANT>>I returned the favor

FACILITATOR>>you mean you told him the same thing?

PARTICIPANT>>revenge is sweetest when he feels what he dished out

FACILITATOR>>or you acted in a way to make him feel bad

FACILITATOR>>like cheating on him, , etc.

PARTICIPANT>>I told him that we would just separate for a "minute." I kept him around like we were still "together."

FACILITATOR>>got it

PARTICIPANT>>I told him that I was going to date other people

FACILITATOR>>and that was how long ago?

PARTICIPANT>>I did

PARTICIPANT>>spring 2001

PARTICIPANT>>about feb late jan

FACILITATOR>>did it feel better when you hurt him? or about the same?

PARTICIPANT>>liberating

PARTICIPANT>>i still cared for him but he needed to know that he could lose me

FACILITATOR>>but now . . although it was liberating in the moment, you are not liberated now, in fact, trapped

FACILITATOR>>right?

PARTICIPANT>>well

FACILITATOR>>cause you said you need to get over your "problem". Or did I misunderstand?

PARTICIPANT>>liberating in the sense that I realized that I had the power to hurt him take the situation into my hands

PARTICIPANT>>before I was the one crying

PARTICIPANT>>you are correct

FACILITATOR>>the question is now ---do you want to get back with him? would he? would you? or you think you need to just sort out and move through your feelings, but move on?

FACILITATOR>>we probably won't be able to make your world "perfect", but if you had a magic wand - - -how would it be?

PARTICIPANT>>no.yes.not right now. correct

PARTICIPANT>>I would change his outer appearance and give him another chance. I have changed over the year and my preferences are very much different now. Appearance wise.

FACILITATOR>>how would you see things right now but in your perfect world?

FACILITATOR>>ok, ignore my last comment! 

FACILITATOR>>but, what about his inner, are you still in love with that?

PARTICIPANT>>Fred would be taller, slimmer, no drama attached. I love him, but not in love.

FACILITATOR>>got it

FACILITATOR>>ok, so let me tell you . . .we are going to try something called REBT. Basically, it is a way of analyzing your actions

PARTICIPANT>>ok

FACILITATOR>>I'm going to try to explain a little bit about it, and then give you as "homework" something to use it on

PARTICIPANT>>ok

FACILITATOR>>Basically, when we have an event and then a reaction, we often have a thought in the middle of it that influences our reaction. But, often, we aren't aware of the thoughts

FACILITATOR>>so, we react "without thinking".

FACILITATOR>>for example, I come home from school, the dishes are still in the sink, and my husband is there and has been home all day

PARTICIPANT>>you yell

FACILITATOR>>I get mad, because the dishes aren't clean

FACILITATOR>>right

FACILITATOR>>but the underlying thought there that made me angry was that he was lazy, and could have or should have cleaned up the dishes

PARTICIPANT>>ok

FACILITATOR>>now, that thought can or cannot be correct, but if I change my thought process, I might not get mad

PARTICIPANT>>ok

FACILITATOR>>for example, if instead I think, "well, he must have been doing something very stressful in order not to be able to clean up the dishes", then how might I react?

PARTICIPANT>>calm



FACILITATOR>>you got it.

FACILITATOR>>so, what we can do is this. Maybe we might need to sort through your thoughts and feelings a little more next session, but you said that at least right now you just want to work through your feelings and get over them

FACILITATOR>>right?

PARTICIPANT>>yes

FACILITATOR>>so, what I was explaining is with REBT what we try to do is figure out our underlying thoughts that might be getting in the way

PARTICIPANT>>ok

FACILITATOR>>so, how do you think we might apply that to your situation with Fred and/or the other guys?

FACILITATOR>>got any ideas?

PARTICIPANT>>fear of commitment has an underlying thought of "I will be deceived"?

FACILITATOR>>good. But even more so, "I will be deceived every time?" really good

PARTICIPANT>>i see

FACILITATOR>>ok (misprint, I meant no questionmark) smile

PARTICIPANT>>:-)

FACILITATOR>>so, since this is coming to a close, what do you think we could have you do for this week until next session?

PARTICIPANT>>I don't know

PARTICIPANT>>talk to the guy that I could see myself with? Confront old boyfriend?

FACILITATOR>>Those could be ideas, but probably right now you need to confront yourself more than others. cause for example you said that you might like the guy if YOU could get over this. but that might come at a later stage

PARTICIPANT>>ok

FACILITATOR>>how about you make a list of three things that Fred did, and how you reacted. And then try to apply what we were talking about, about the underlying thoughts, and how you carry them over.

FACILITATOR>>

FACILITATOR>>Does that make any sense at all?

PARTICIPANT>>yes

FACILITATOR>>good. so, it is about that time that we should go, any questions before we end? I will see you next week at this time

FACILITATOR>>that was a question (smile?)

FACILITATOR>>oops again!

FACILITATOR>>he he

PARTICIPANT>>yes

PARTICIPANT>>lol

PARTICIPANT>>:-)

PARTICIPANT>>I enjoyed myself

FACILITATOR>>good, so did I!

FACILITATOR>>See you next week!

PARTICIPANT>>i never really talk about myself

PARTICIPANT>>bye

\*-\*\*\*\* --FACILITATOR left EDU\_DISS\_Room1. Time: Mon May 20 18:21:54 2002

\*-\*\*\*\* --PARTICIPANT left EDU\_DISS\_Room1. Time: Mon May 20 18:22:00 2002

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Session in EDU DISS\_Room1 ended (all PARTICIPANTS have left).

Time: Mon May 20 18:22:00 2002

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## BIOGRAPHICAL SKETCH

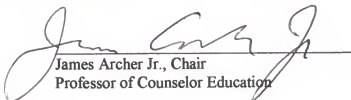
Martha Lana Bogardus Groble was born near Meadville, Pennsylvania on September 4, 1947. She graduated from Cochranon Area Junior Senior High School in May 1965 and attended Indiana University of Pennsylvania where in January 1969 she earned a bachelor's degree with honors in Education (majoring in mathematics). She taught 7<sup>th</sup> and 8<sup>th</sup> grade mathematics at Roosevelt Jr. High School, Altoona, Pennsylvania before enrolling in the University of Oklahoma where she earned a master's degree in Anthropology in 1971. She conducted or participated in academic fieldwork in southeast Alaska; the Yucatan peninsula; San Jose, California; and Sierra Leone, West Africa. She worked in education, collections, and exhibits at the Stovall Museum of Science and History; the Jacksonville Museum of Science and History; the Riley County, Kansas Historical Society; and the Kansas State University Planetarium. During her time in Kansas, she taught physics and anthropology at Kansas State University. After a parenting hiatus of several years, during that she was active in school, community and volunteer service, she established and worked in a psychiatric practice in 1983. In 1986, she enrolled in the University of North Florida and earned a master's degree in counseling psychology in 1989. She earned her license in mental health counseling in 1992 and continued to work in the psychiatric practice. In 1993, she was awarded a Veteran's Administration contract for vocational rehabilitation counseling. To enhance her ability to provide excellent services to her veteran clients, she enrolled in the University of Florida, College of Education, Department of Counselor Education to earn

a Ph.D. in mental health counseling (specializing in vocational rehabilitation counseling) in the fall of 2002. She is a certified rehabilitation counselor and a certified career assessment associate. She is an adjunct instructor at the University of North Florida in the department of Rehabilitation Counseling and she is the primary care giver for her husband's neptuagenarian parents who live with them.

As a mathematics major, Dr. Bogardus began learning computer programming in 1967. Her knowledge and skills grew as the computer world became accessible to individuals. She designed the computer lab at St. Mark's Episcopal Day School in 1993 and focused her graduate research in the area of computers and counseling.

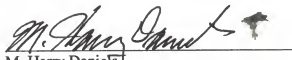
She is an avid genealogist, proficient in the use of computer data bases to research lineages. She records her findings in traditional scholarly format and in personal photographic journals that she shares over the Internet in prominent genealogy sites, and on her family website. She enjoys textiles including sewing and quilting with a computerized sewing machine, and hand stitching needlepoint, petit point, crewel, and embroidery. She relaxes by reading fantasy literature (brain candy) and enjoys fantasy role playing gaming. When away from her computers, books and 30-sided dice, she hikes, swims, canoes, rafts, sails, and backpacks on four continents with plans to explore two more continents. Although she and her family camp extensively and world wide as a family or with Scouts and friends, her favorite campsite has always been Holiday Inn poolside.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.




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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.




M. Harry Daniels  
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Linda R. Shaw  
Professor of Rehabilitation Counseling

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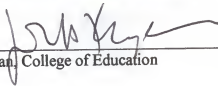
This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 2002



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